

POTTAWATTAMIE CO.
 PRELIMINARY
 IM-029-2(55)49--13-78
 LETTING DATE



Iowa Department of Transportation
Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

INTERSTATE ROAD SYSTEM
POTTAWATTAMIE COUNTY
 PRELIMINARY

BNSF RAILWAY COUNCIL BLUFFS SUBDIVISION MP 488.60 TO MP 492.80
 BNSF RAILWAY BAYARD SUBDIVISION MP 481.02 TO MP 483.39
 CBEC RAILWAY 16TH AVENUE TO CBEC JUNCTION
 IOWA INTERSTATE RAILROAD SUBDIVISION 4 MP 487.3 TO MP 490.0
 IOWA INTERSTATE RAILROAD COUNCIL BLUFFS WEST YARD
 BARTLETT GRAIN ELEVATOR INDUSTRIAL TRACKAGE
 SOUTHWEST IOWA RENEWABLE ENERGY (SIRE) INDUSTRIAL TRACKAGE
 WESTERN ENGINEERING INDUSTRIAL TRACKAGE

SCALES: As Noted

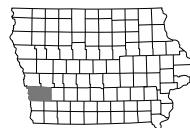
Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

NO MILEAGE SUMMARY



For Project Location Map
 Refer to Sheets A.04 - A.05



REVISIONS	TOTAL
PROJECT IDENTIFICATION NUMBER	04-78-029-010-03
PROJECT NUMBER	IM-029-2(55)49--13-78
R.O.W. PROJECT NUMBER	IMN-029-3(65)54--0E-78

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* Color Plan Sheets

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block
X	X	X

PRELIMINARY PLANS

Subject to change by final design.

REVISED D5 SUBMITTAL
Date: June 17, 2011

STANDARD SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Luminaire
	Fruit Tree		Traffic Signal
	Shrub (Bushes)		Traffic Signal with Luminaire
	Timber		Telephone Pedestal
	Hedge		Television Pedestal
	Stump		Telephone Pole
	Swamp		Telephone Pole (Second Company)
	Rock Outcrop		Telephone Pole (Third Company)
	Broken Concrete		Telephone Pole (Fourth Company)
	Revetment (Rip Rap)		Telephone Pole (Fifth Company)
	Cemetery		Power Pole
	Grave		Power Pole (Second Company)
	Cave		Power Pole (Third Company)
	Sink Hole		Power Pole (Fourth Company)
	Board Fence		Power Pole (Fifth Company)
	Chain Link or Security Fence		Electrical Highline Tower (Metal or Concrete)
	Wire Fence		Telephone Riser Pole
	Terrace		Power Riser Pole
	Earth Dam or Dike (Existing)		Telegraph Pole
	Earth Dam or Dike (Proposed)		Satellite TV Dish
	Tile Outlet		Existing Water Line
	Edge of Water		Existing Water Line (Second Company)
	Existing Drainage		Existing Sanitary Sewer Line
	Proposed Drainage		Existing Telephone Line
	Right of Way Rail or Lot Corner		Existing Telephone Line (Second Company)
	Concrete Monument		Existing Fiber Optics Telephone Line
	Well		Existing Storm Sewer Line
	Windmill		Existing Gas Line
	Beehive Intake		Existing High Pressure Gas Line
	Existing Intake		Existing Gas Line (Second Company)
	Proposed Intake		Existing High Pressure Gas Line (Second Company)
	Existing Utility Access (Manhole)		Existing Power Line
	Proposed Utility Access (Manhole)		Existing Power Line (Second Company)
	Fire Hydrant		Cable Television Line
	Water Hydrant (Rural)		

	Guardrail (Beam or Cable)
	Guard Post (one or two)
	Guard Post (over two)
	Filler Pipe
	Gas Valve
	Water Valve
	Speed Limit Sign
	Mile Marker Post
	Sign
	Water Hook Up
	Radio Tower
	Tower Anchor
	Electric Box
	Traffic Signal Control Box
	Rail Road Signal Control Box
	Telephone Switch Box

	Shading - Proposed Paved Surface
	Shading - Proposed Granular Surface
	Shading - Other, with identification
	Shading - Clearing & Grubbing Area

UTILITY LEGEND

	MID AMERICAN ENERGY
	MIDAMERICAN
	QWEST
	QWEST
	QWEST
	RAILROADS
	AQUILA
	COX COMMUNICATIONS
	U.S. WEST
	COX COMMUNICATIONS
	COX COMMUNICATIONS
	U.S. WEST
	Mc LEOD USA
	SPRINT
	IOWA COMMUNICATIONS NETWORK (ICN)
	IOWA NETWORK SERVICE (INS)
	DIGITAL TELEPORT INC. (DTI)
	QWEST COMMUNICATIONS
	COX COMMUNICATIONS
	M.C.I.
	CITY OF COUNCIL BLUFFS
	AT&T
	MID AMERICAN ENERGY
	CITY OF COUNCIL BLUFFS & IA, D.O.T.
	PEOPLES NATURAL GAS
	AQUILA
	UNKNOWN
	MAGELLAN
	BRITISH PETROLEUM
	KINDER MORGAN
	KANE PIPELINE
	PEOPLES NATURAL GAS
	UNKNOWN (ABANDONED)
	AQUILA
	CITY OF COUNCIL BLUFFS
	CITY OF COUNCIL BLUFFS

RIGHT OF WAY LEGEND

	Proposed Right of Way
	Existing Right of Way
	Existing and Proposed Right of Way
	Easement and Existing Right of Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	Property Line
	Access Control

CONVENTIONAL SIGNS

	Survey Line
	Section Corner
	Proposed Profile Grade
	Railroad (Existing)
	Field Tile
	Culverts
	Stream
	Railroad (Proposed)
	Track Removal
	Track Abandonment

UTILITY LEGEND (CONTINUED)

	CITY OF COUNCIL BLUFFS
	STATE OF IOWA
	CITY OF COUNCIL BLUFFS
	PRIVATE SEWER

Legend And Symbol Information Sheet
(Symbols are Typical Only)

BNSF South Line Segment = Proposed BNSF South Line Segment from CBEC Junction on existing BNSF Council Bluffs Subdivision through the proposed BNSF Wye to existing BNSF Bayard Subdivision to Council Bluffs.

BNSF Wye Track East Leg = Proposed BNSF Wye Connection from proposed BNSF South Line Segment towards CBEC Junction to existing BNSF Bayard Subdivision towards Bayard.

BNSF Wye Track North Leg = Proposed BNSF Wye Connection from existing BNSF Bayard Subdivision towards Bayard to existing BNSF Bayard Subdivision towards Council Bluffs.

BNSF North Segment 1 = Proposed BNSF North Line Segment from existing Bayard Subdivision towards Bayard to existing BNSF Council Bluffs Subdivision towards Council Bluffs including use of IAIS trackage.

BNSF North Segment 2 = Proposed BNSF North Line Segment from existing Bayard Subdivision towards Bayard to existing BNSF Council Bluffs Subdivision towards Council Bluffs including use of IAIS trackage.

BNSF Connection to Existing Council Bluffs Sub = Proposed grade raise to existing BNSF Council Bluffs Subdivision in the vicinity of CBEC Junction to accommodate proposed CBEC trackage.

BNSF Existing Trackage Removals and Bumper Installation = Proposed BNSF track removals and abandonments and installation locations of track bumpers.

CBEC Main Track = Proposed CBEC realignment from existing CBEC alignment towards Council Bluffs to CBEC Junction.

CBEC Future 2nd Main Track = Proposed CBEC siding from existing CBEC alignment towards Council Bluffs to the proposed CBEC alignment north of CBEC Junction.

CBEC Future 2nd Main Track Extension = Proposed future extension of the CBEC siding across existing BNSF Council Bluffs Subdivision to CBEC Junction.

CBEC Connection to Existing CBEC Junction = Proposed connection to existing CBEC Junction trackage.

CBEC Ex Grade Raise = Proposed grade raise to existing CBEC main track at CBEC Junction to accommodate proposed SIRE trackage.

CBEC Existing Trackage Removals = Proposed removal of existing CBEC trackage east of proposed CBEC line segment.

IAIS Interchange Track 1 = Proposed IAIS Interchange Track 1 from northwest end of IAIS Council Bluffs West Yard to proposed BNSF Wye.

IAIS Interchange Track 2 = Proposed IAIS Interchange Track 2 from northwest end of IAIS Council Bluffs West Yard to proposed BNSF Wye.

IAIS North Yard Connection = Proposed connection from interchange tracks to north end of IAIS Council Bluffs West Yard.

IAIS Maintenance Track = Proposed maintenance track at north end of IAIS Council Bluffs West Yard.

IAIS Existing Track 4 Connection = Proposed connection between track 5 and track 4 at north end of IAIS Council Bluffs West Yard.

IAIS South Yard Connection = Proposed connection from interchange tracks to south end of IAIS Council Bluffs West Yard.

IAIS Existing Trackage Removals = Proposed IAIS track removals within the IAIS Council Bluffs Yard.

SIRE Track for Revised CBEC Access = Proposed connection between BNSF Council Bluffs Subdivision and existing SIRE trackage in the vicinity of CBEC Junction.

SIRE Existing Track Grade Raise = Proposed track raise to existing SIRE trackage in the vicinity of CBEC Junction.

SIRE Crossover Between CBEC and BNSF = Proposed crossover between proposed CBEC trackage towards Council Bluffs and proposed BNSF South Line Segment towards CBEC Junction.

Western Engineering Track 1 = Proposed Western Engineering industrial rail spur.

Western Engineering Track 2 = Proposed Western Engineering industrial rail spur.

Bartlett Track Connection = Proposed connection track between the CBEC main track and existing Bartlett trackage.

Bartlett Track 1 = Proposed realignment to stub-end existing Bartlett track 1.

Bartlett Track 2 = Proposed realignment to stub-end existing Bartlett track 2.

Bartlett Track 3 = Proposed realignment to stub-end existing Bartlett track 3.

Bartlett Track 4 = Proposed stub-end of existing BNSF track utilized by Bartlett.

Bartlett Track 5 = Proposed stub-end of existing BNSF track utilized by Bartlett.

Bartlett Locomotive Tie Up = Proposed connection between proposed Bartlett Track Connection and existing BNSF trackage.

Channel 10 = Proposed drainage channel to connect trackside ditches to existing Mosquito Creek culvert near CBEC Junction.

Channel 20 = Proposed drainage channel to provide drainage connection near the Bartlett Track Connection.

Bike Path = Proposed realignment of Lake Manawa Mixed-Use Trail to accommodate proposed CBEC trackage.















8TH STREET = Proposed reconstruction of 8th Street at 12th Avenue to accommodate proposed BNSF North line.

12TH AVENUE = Proposed reconstruction of 12th Avenue at 8th Street to accommodate proposed BNSF North line.

7TH STREET EXTENSION = Proposed connection from 7th Street north of existing IAIS tracks to intersection of 6th Street and 14th Avenue.

6TH STREET = Proposed removal of existing BNSF track from at-grade crossing.

16TH AVENUE = Proposed removal of existing BNSF track from at-grade crossing.

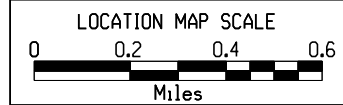
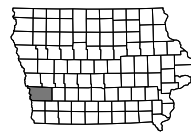
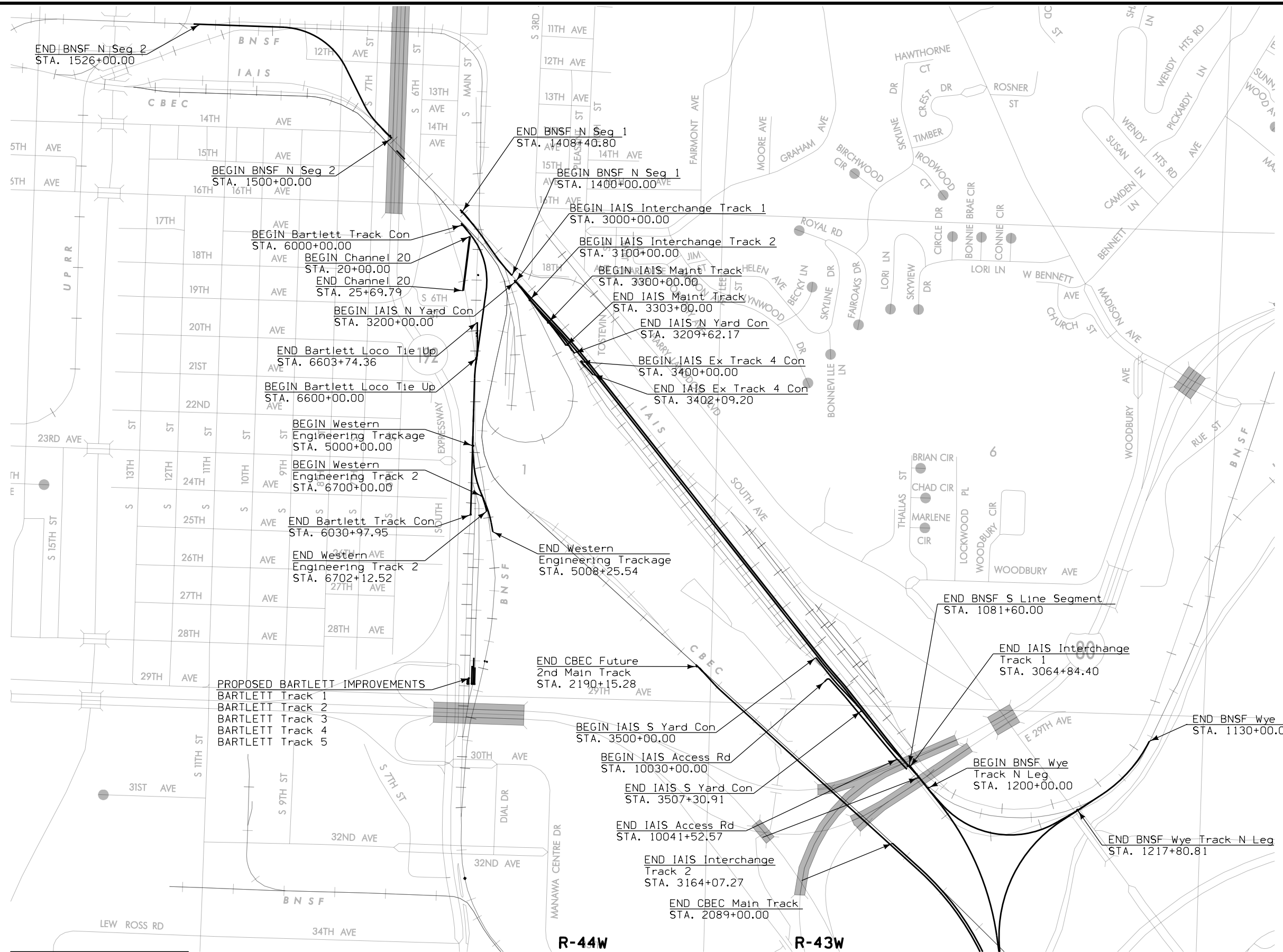
RAILROAD SYMBOLS	
	Railroad Turnout (electric lock)
	Railroad Turnout (hand throw)
	Railroad Turnout (power switch)
	Existing Power Pole w/ guy wire
	Railroad Signal
	Existing Railroad Signal Cabinet
	Proposed Railroad Signal House
	Track Detector
	Hot Box Detector
	Milepost
	Milemarker
	RR Crossing Gate
	Fiber Optic Warning Sign
	Fiber Optic Vault

RAILROAD COMPANY ABBREVIATIONS	
BNSF	- BNSF RAILWAY
CBEC	- CBEC RAILWAY INC.
IAIS	- IOWA INTERSTATE RAILROAD LTD.
UPRR	- UNION PACIFIC RAILROAD CO.
RAIL SERVED INDUSTRY ABBREVIATIONS	
BARTLETT	- BARTLETT COUNCIL BLUFFS LLC
SIRE	- SOUTHWEST IOWA RENEWABLE ENERGY LLC
WESTERN	- WESTERN ENGINEERING CO. INC.

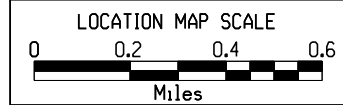
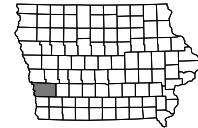
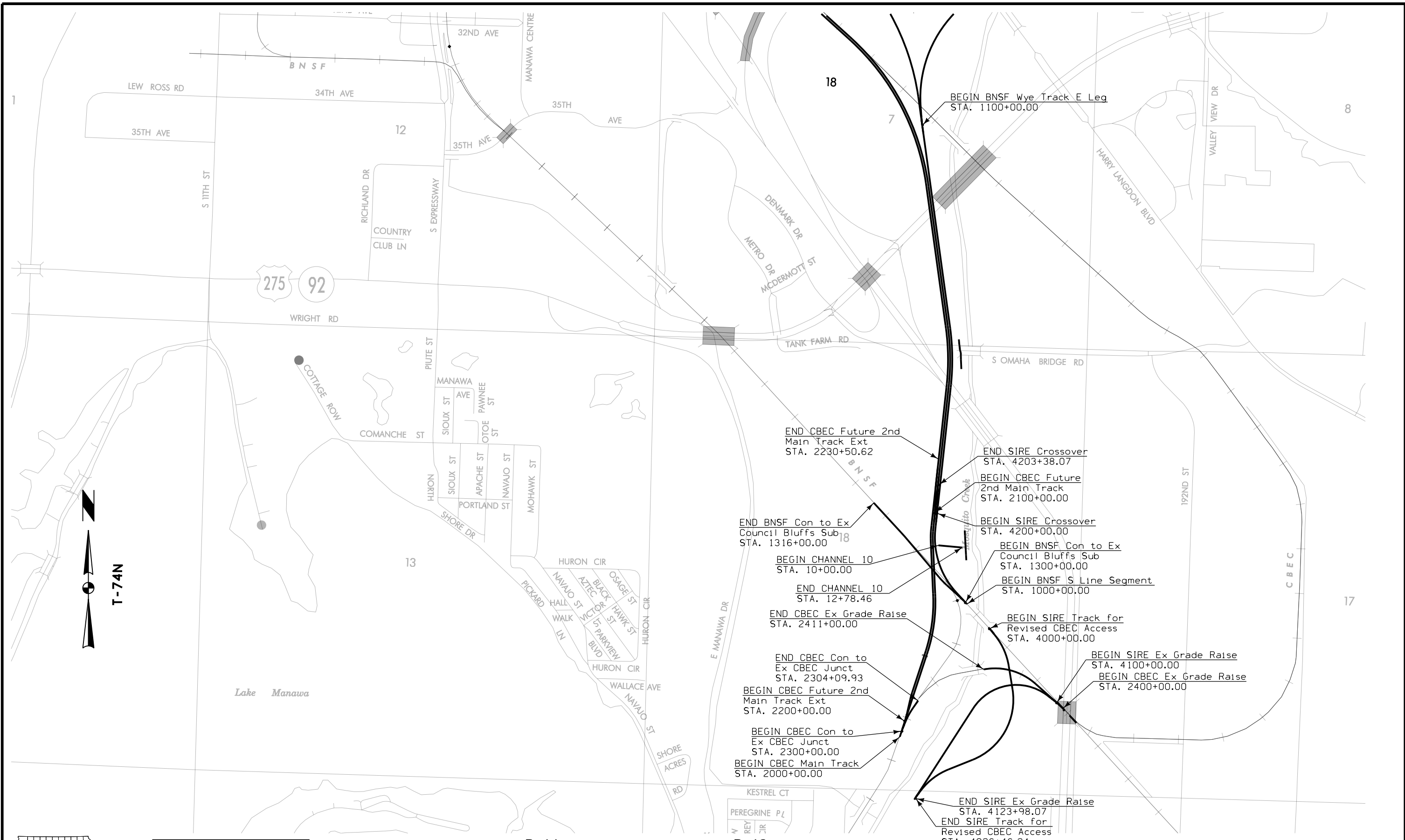
Alignment Descriptions And Railroad Symbols

T-75N

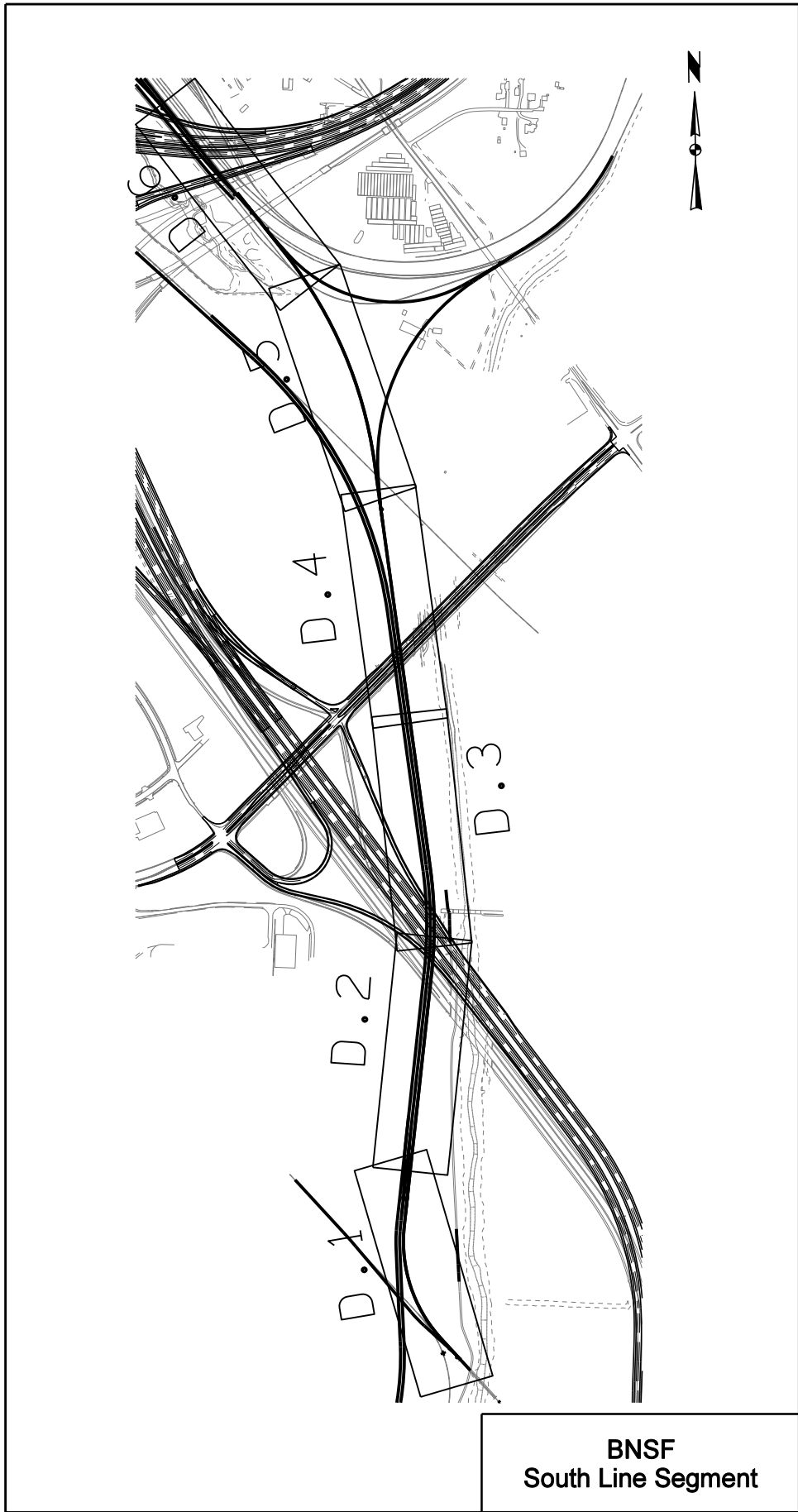
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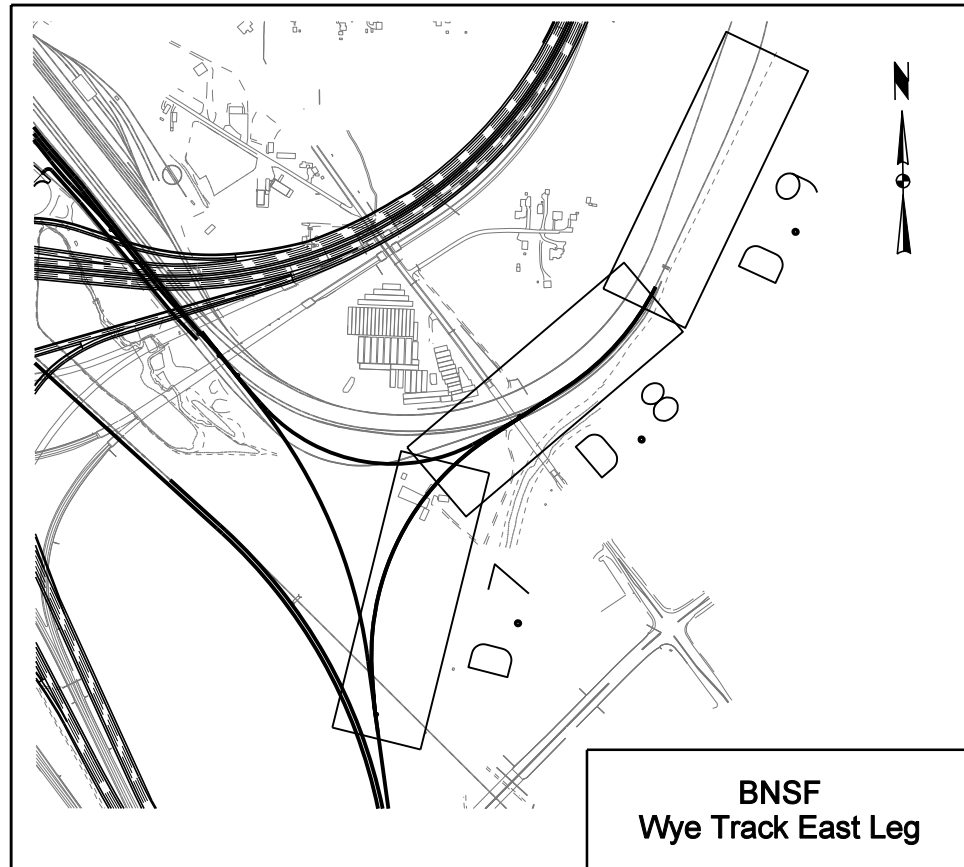
Location Map



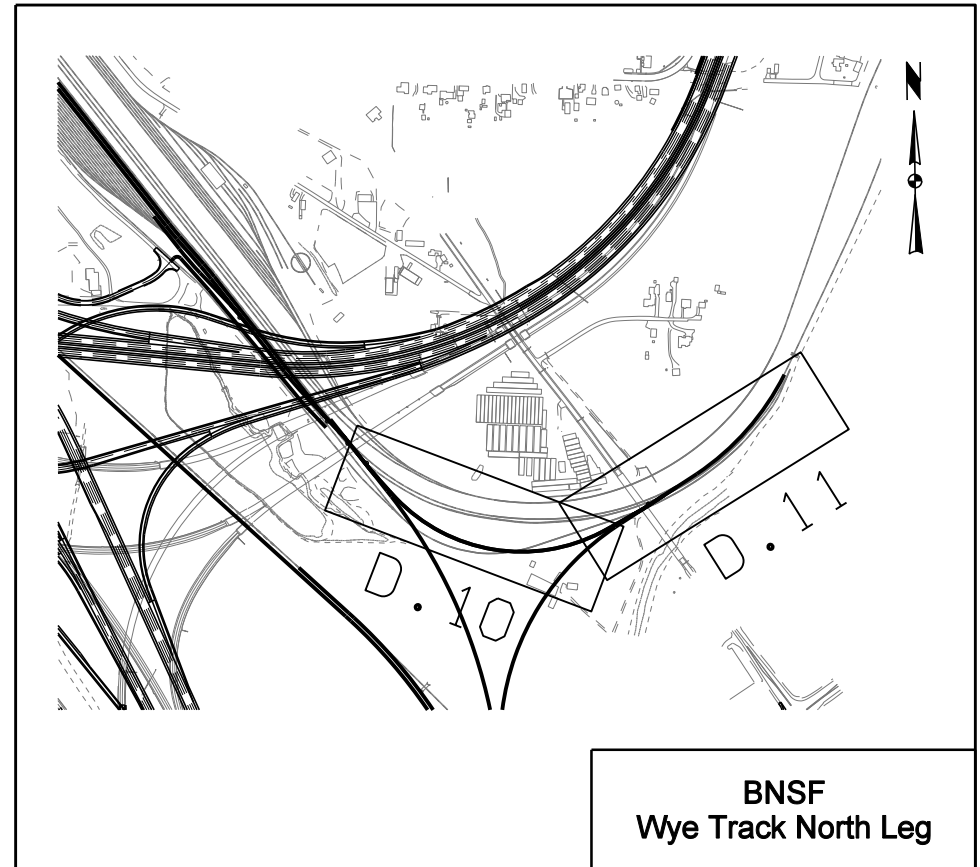
Location Map



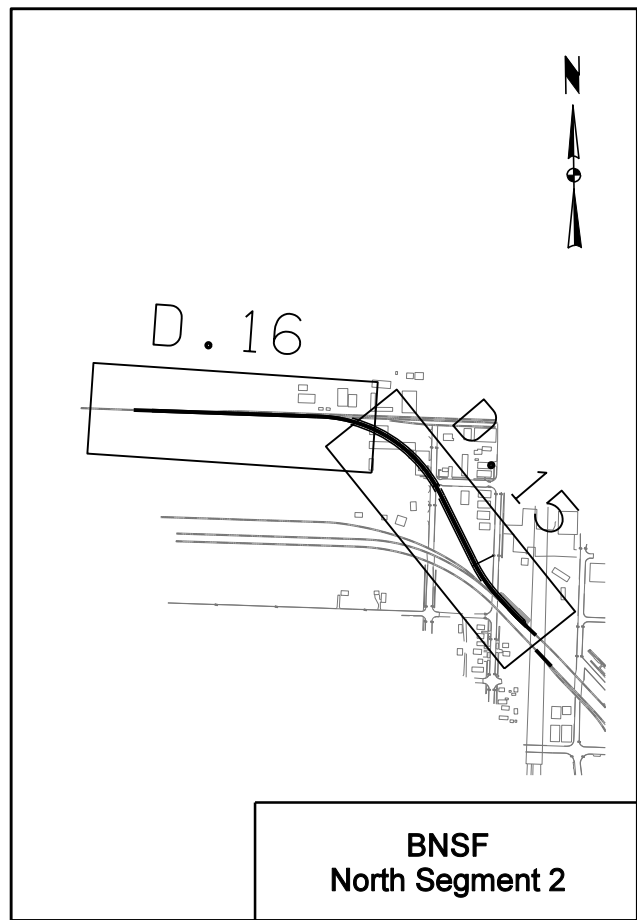
**BNSF
South Line Segment**



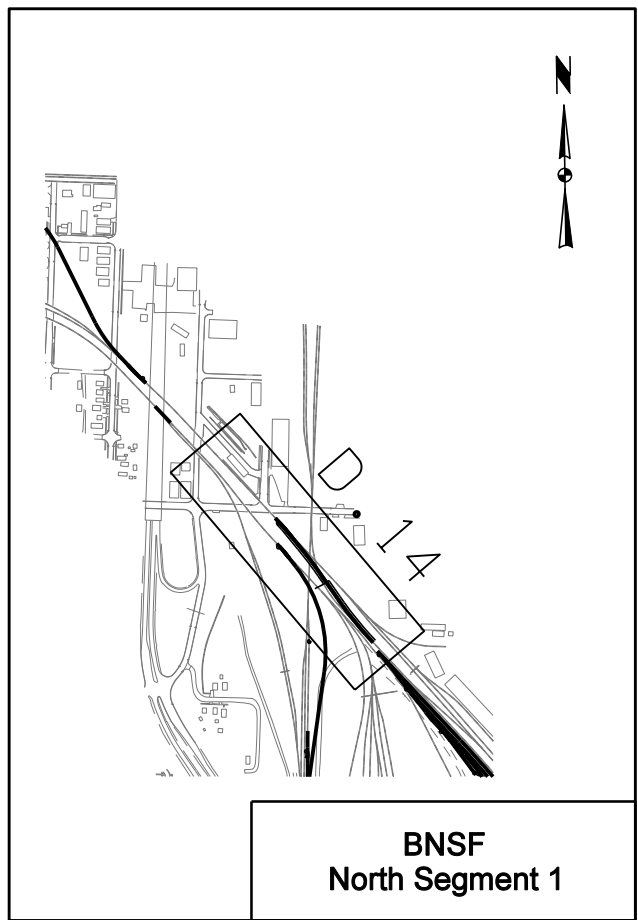
**BNSF
Wye Track East Leg**



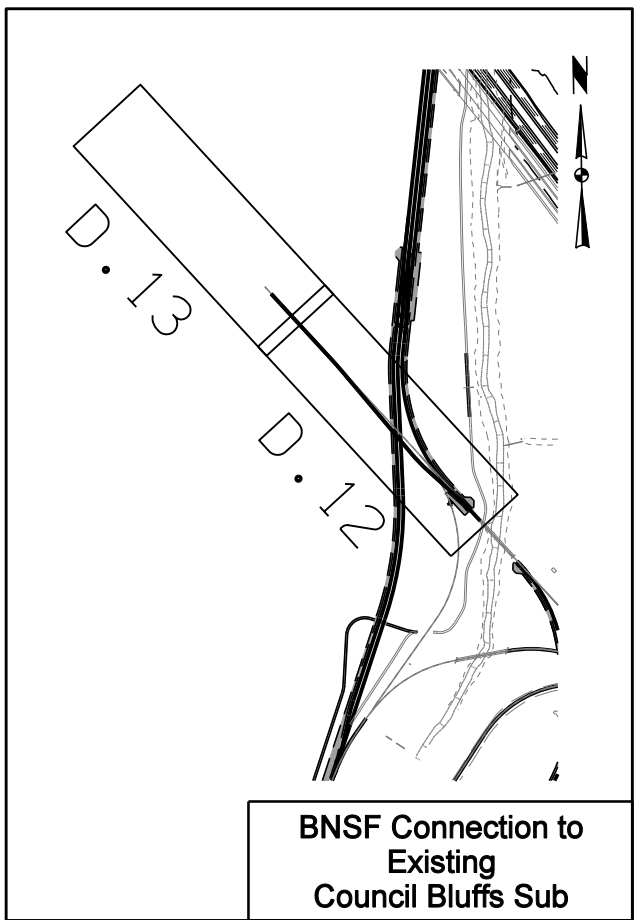
**BNSF
Wye Track North Leg**



**BNSF
North Segment 2**

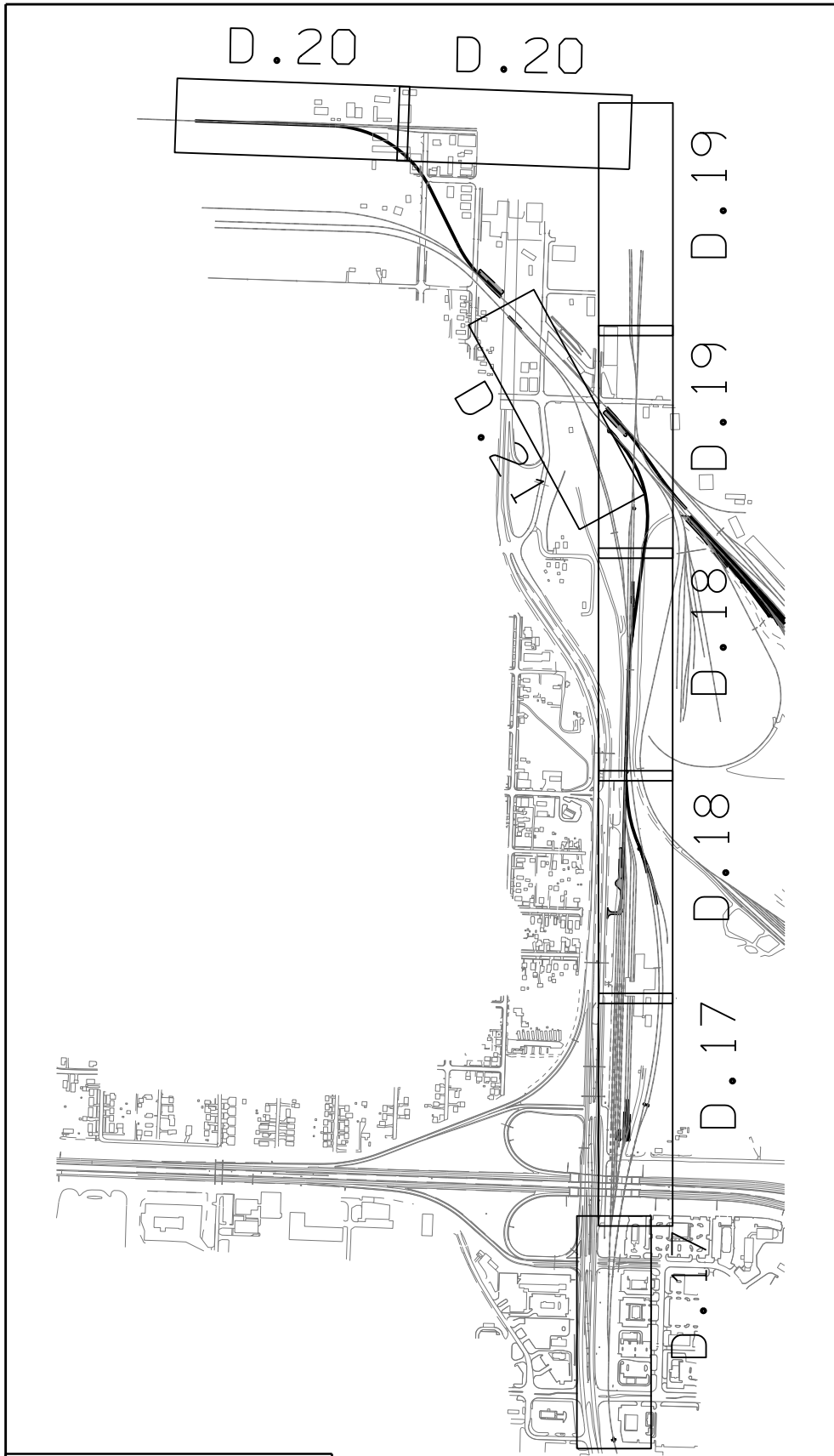


**BNSF
North Segment 1**

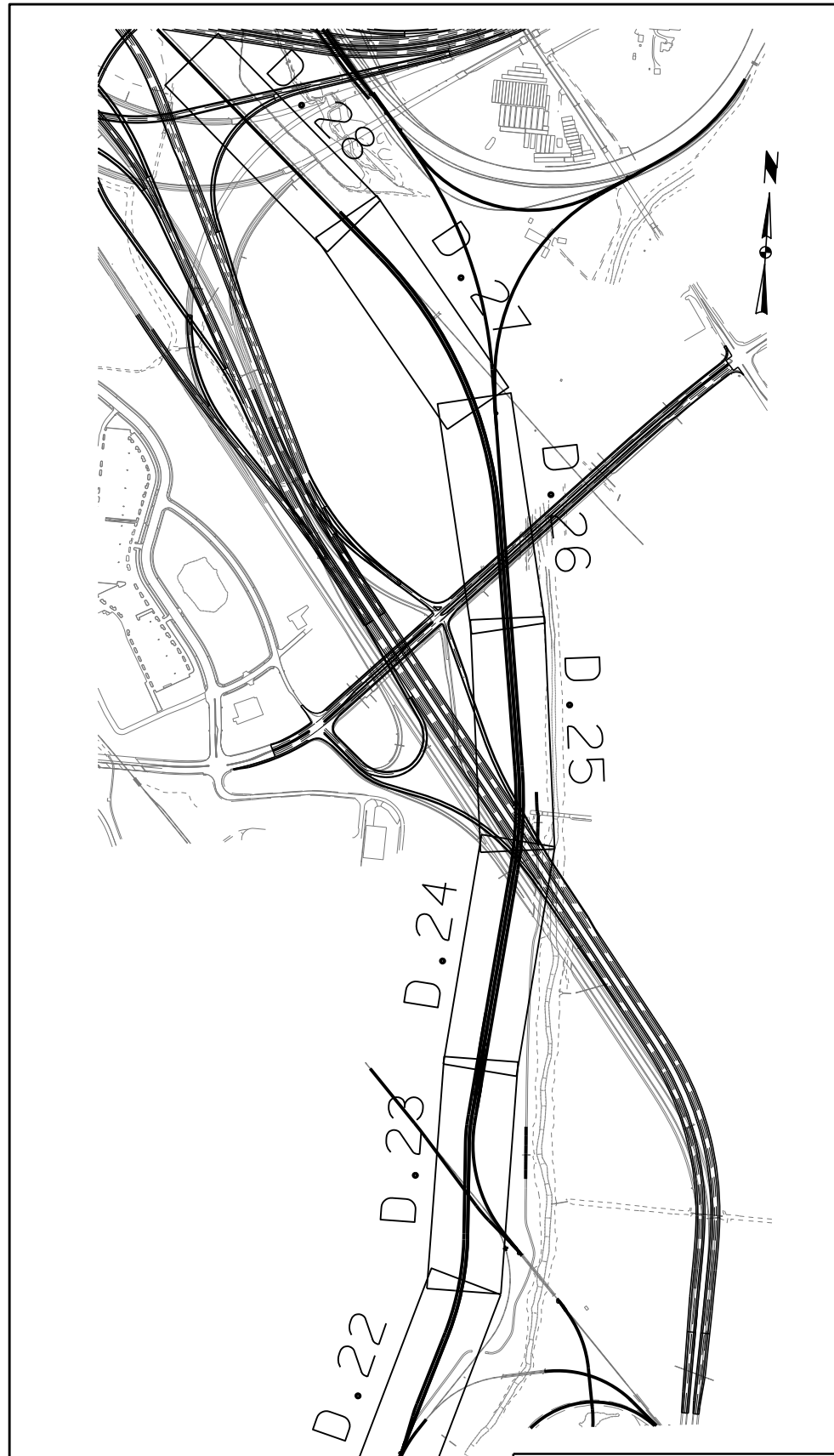


**BNSF Connection to
Existing
Council Bluffs Sub**

Project Key Map



BNSF Existing Trackage Removals

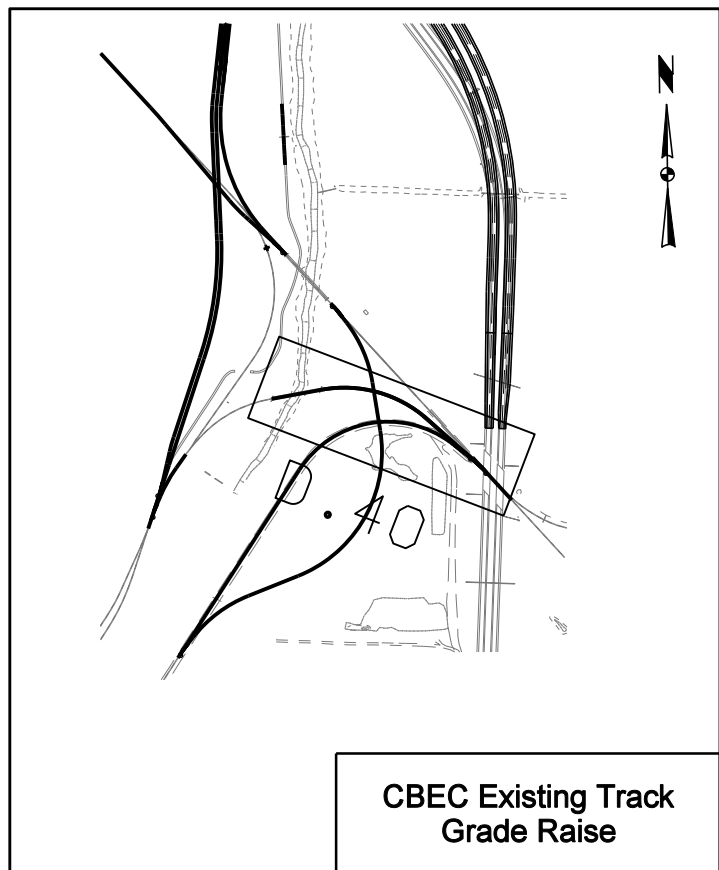
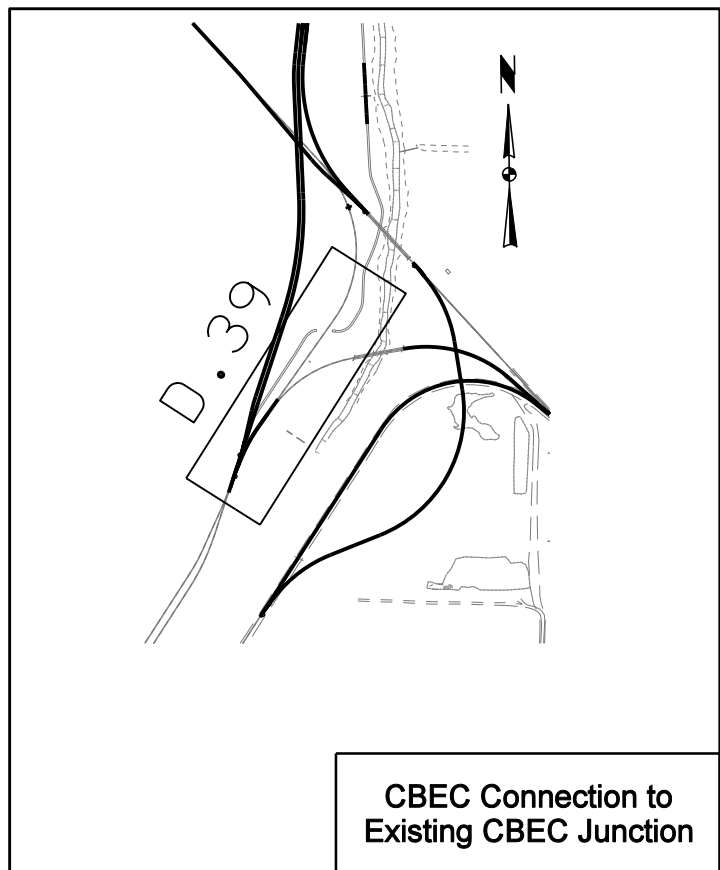
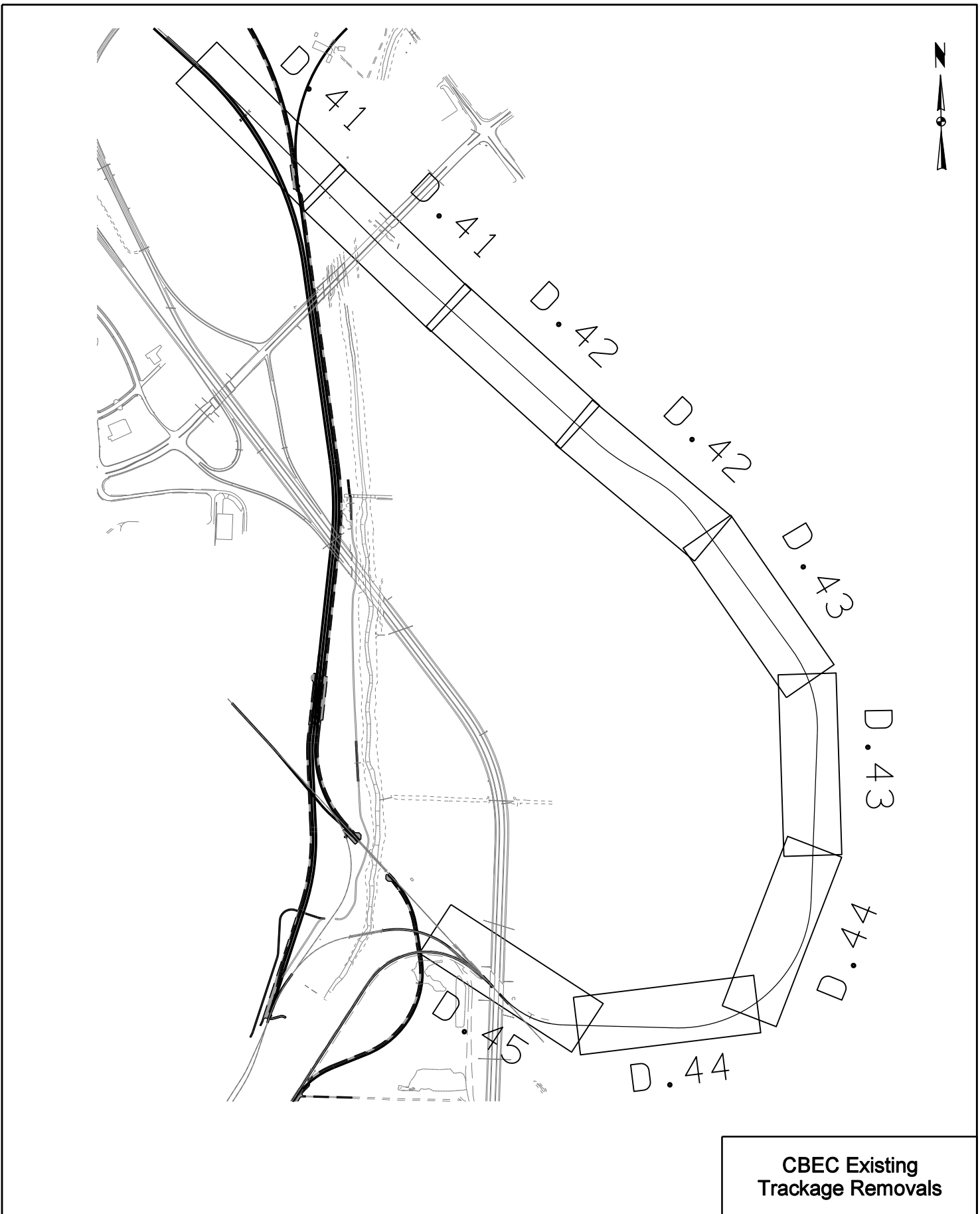
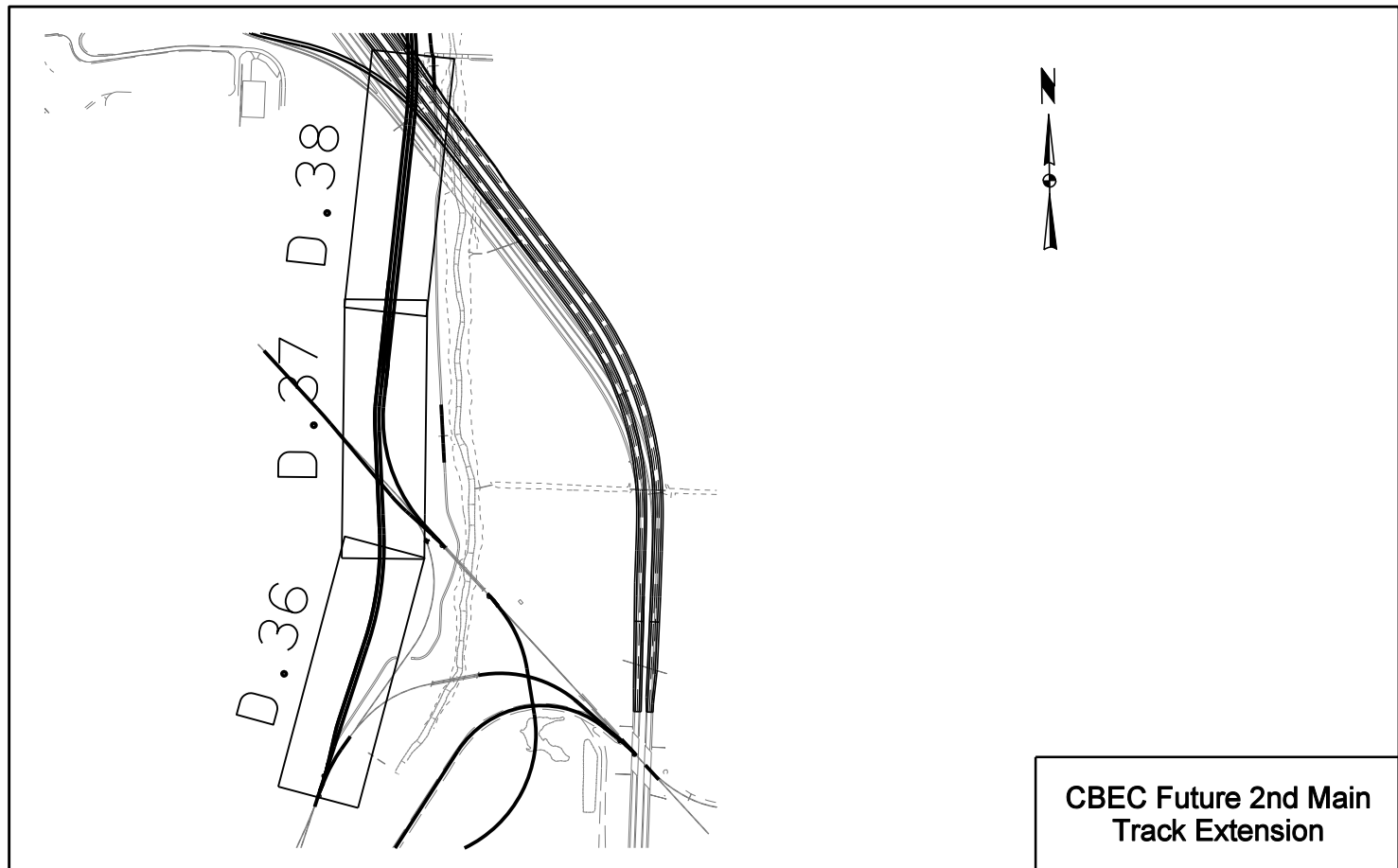


CBEC Main Track



CBEC Future 2nd Main Track

PROJECT KEY MAP



PROJECT KEY MAP



IAIS
Interchange Track 1



IAIS
Interchange Track 2

PROJECT KEY MAP

ENGLISH

IOWA DOT

DESIGN TEAM

Iowa DOT\HDR

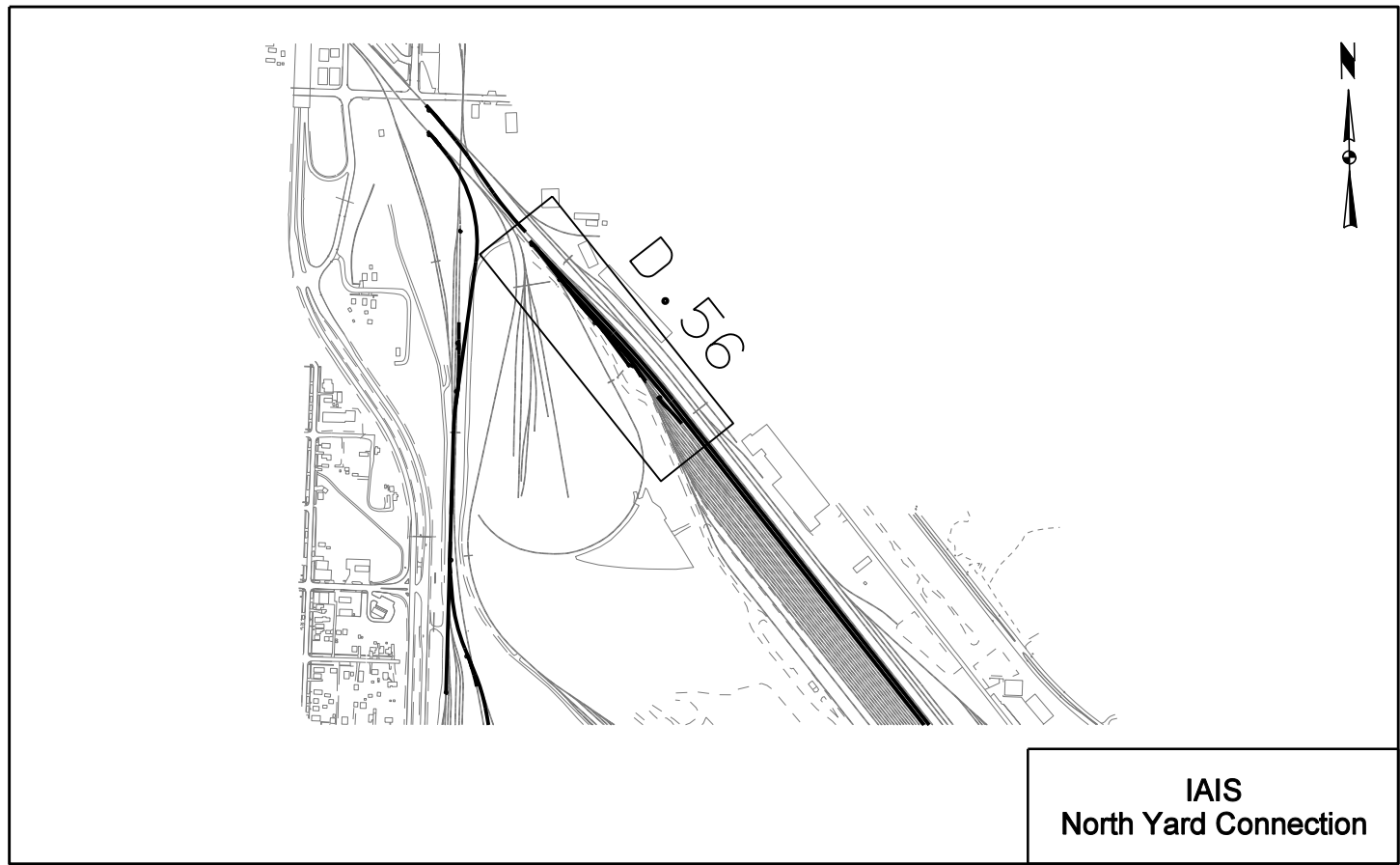
POTTAWATTAMIE COUNTY

PROJECT NUMBER

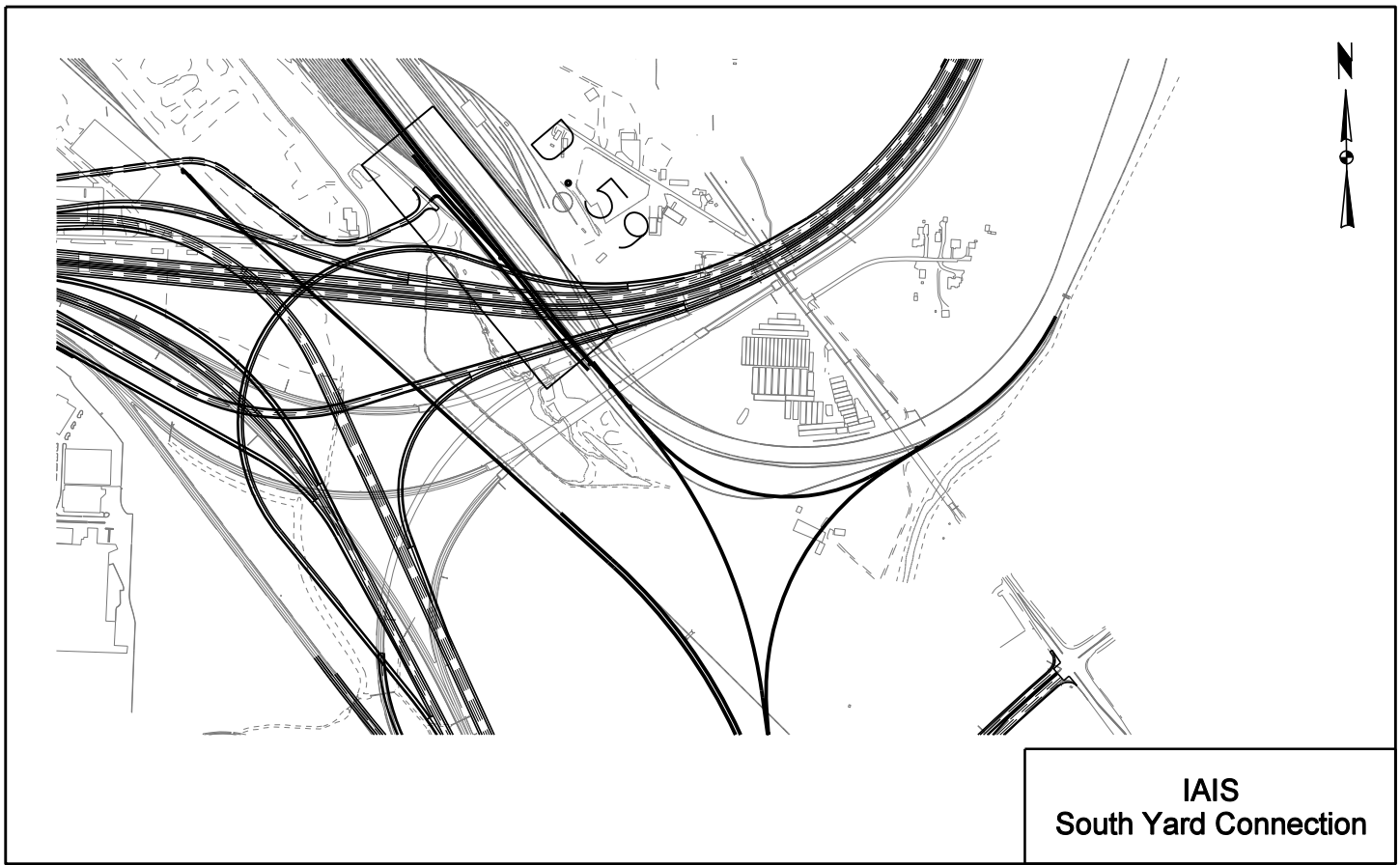
IM-029-2(55)49--13-78

SHEET NUMBER

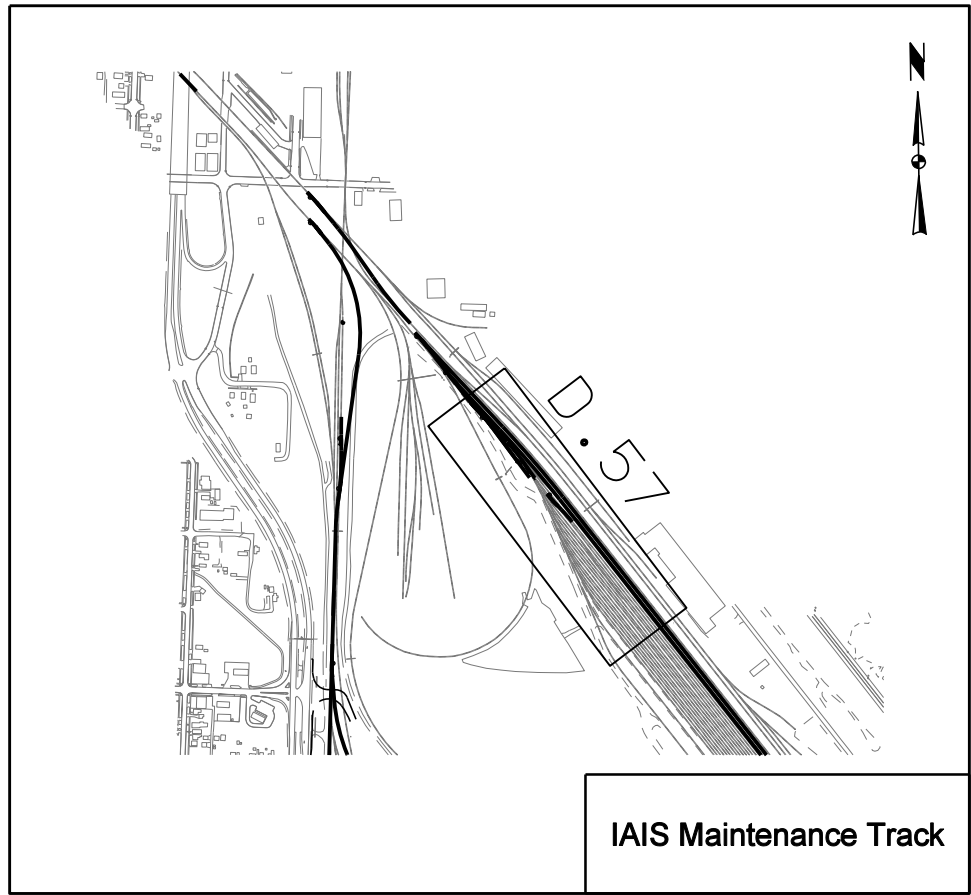
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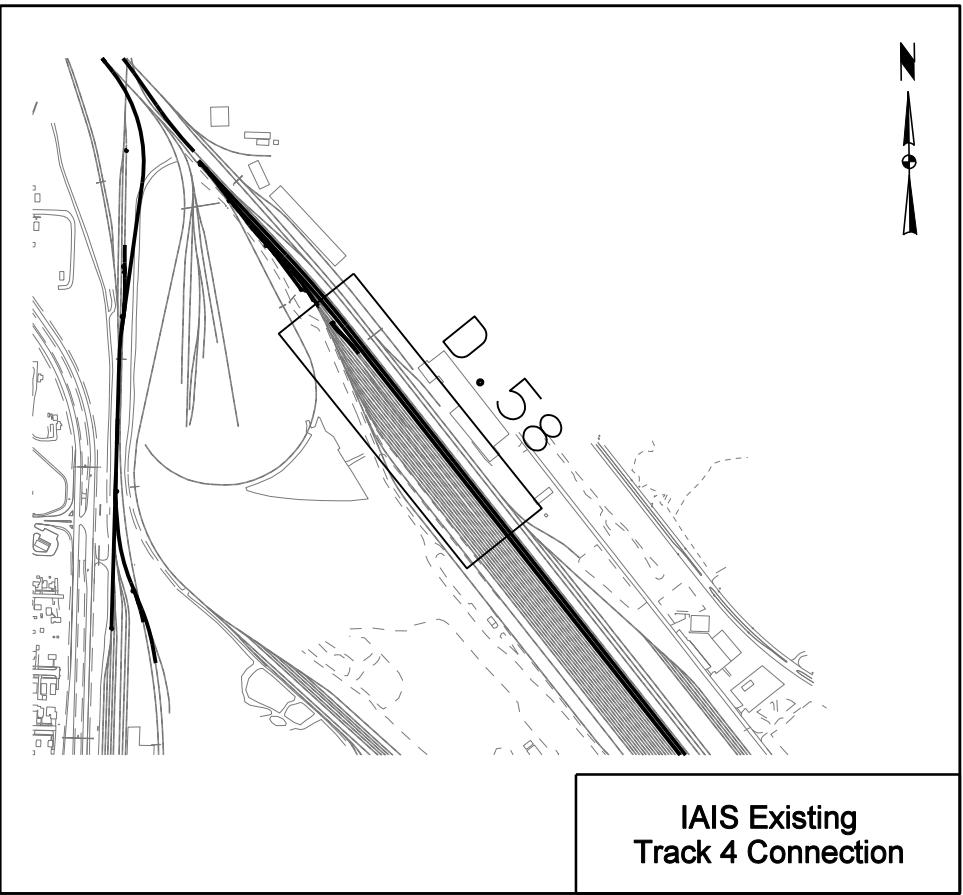
**IAIS
North Yard Connection**



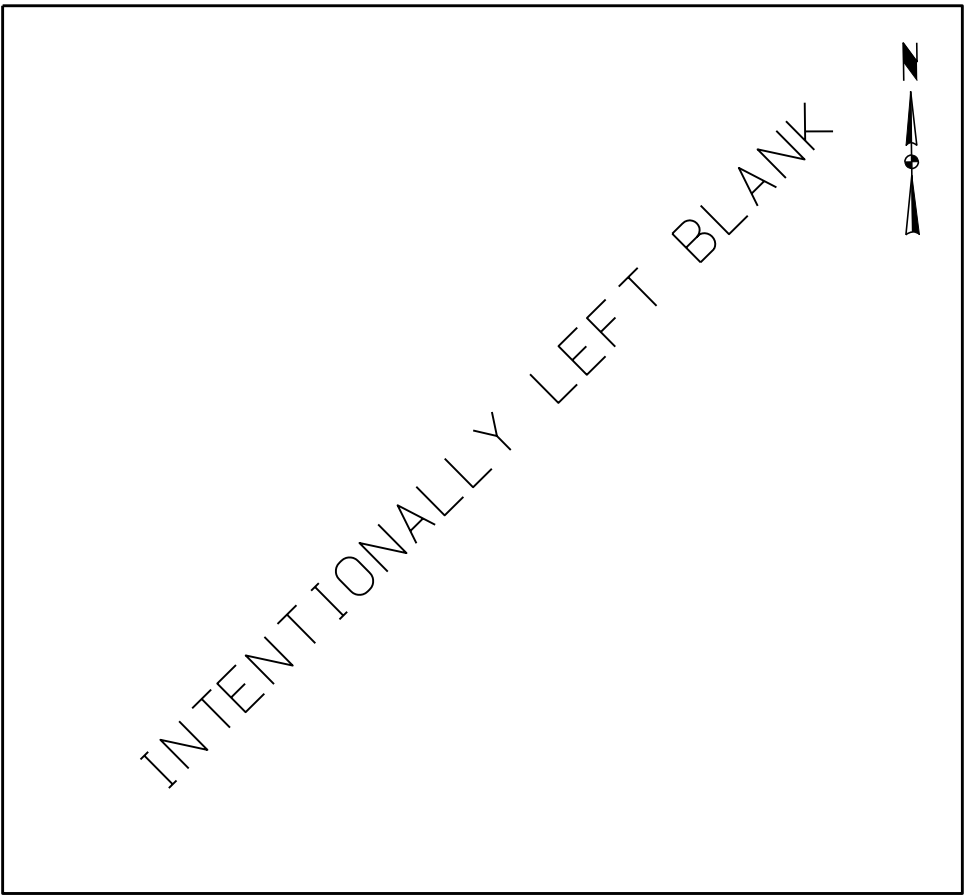
**IAIS
South Yard Connection**



IAIS Maintenance Track



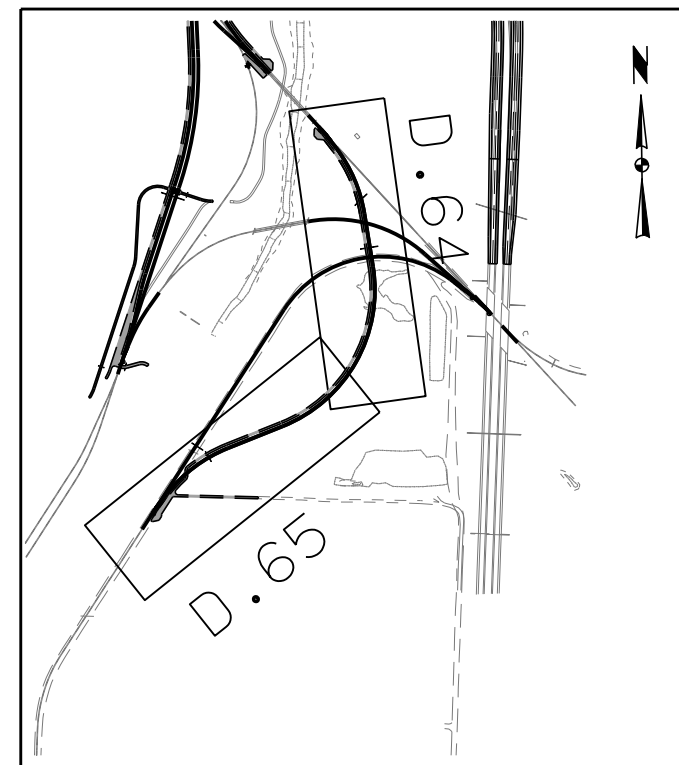
**IAIS Existing
Track 4 Connection**



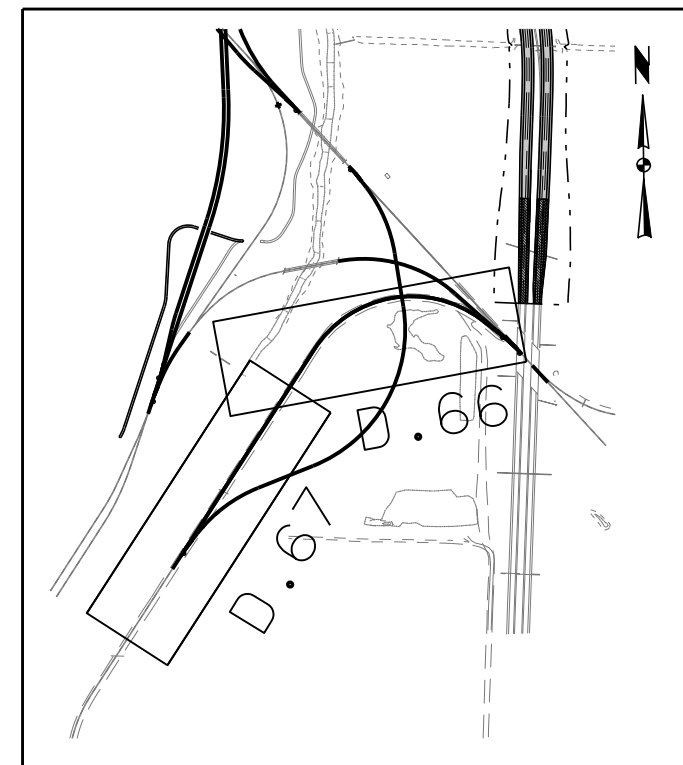
PROJECT KEY MAP



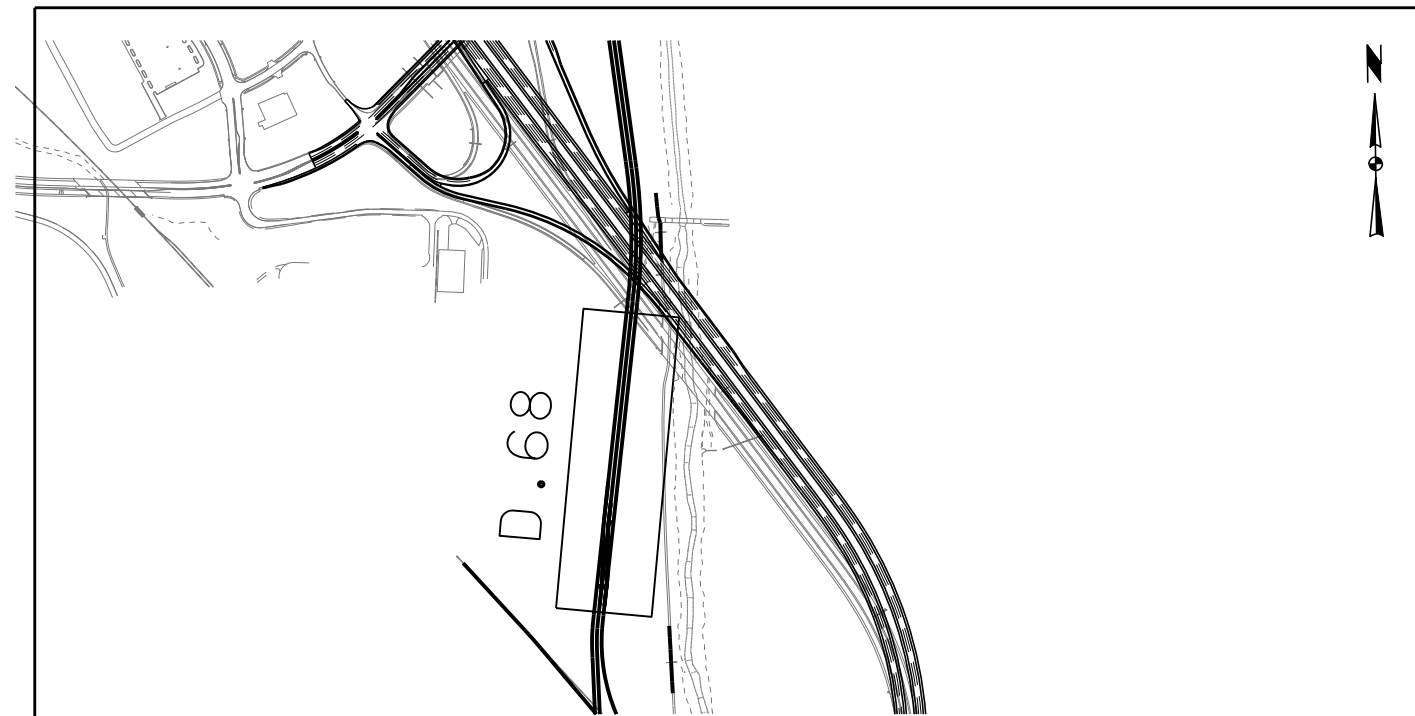
IAIS Existing
Track Removal



SIRE Track for
Revised CBEC Access

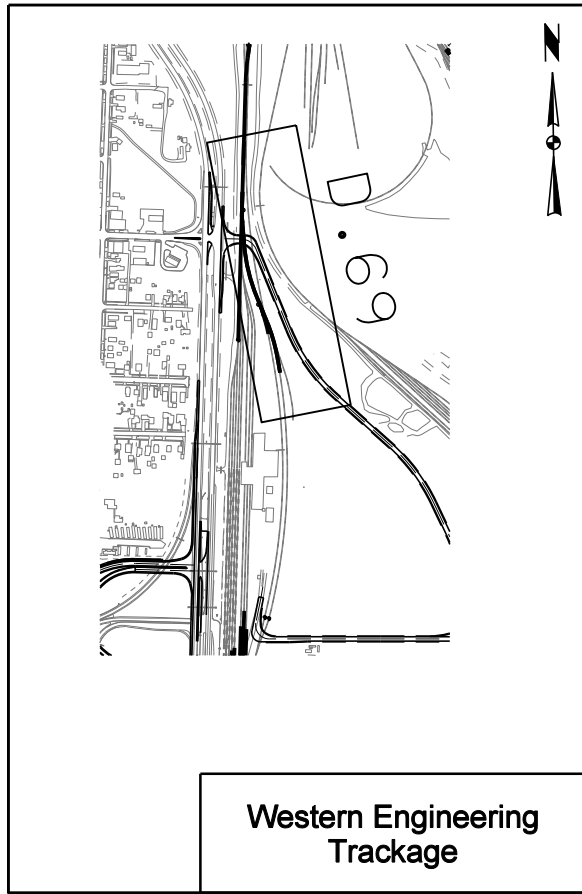


SIRE Grade Raise

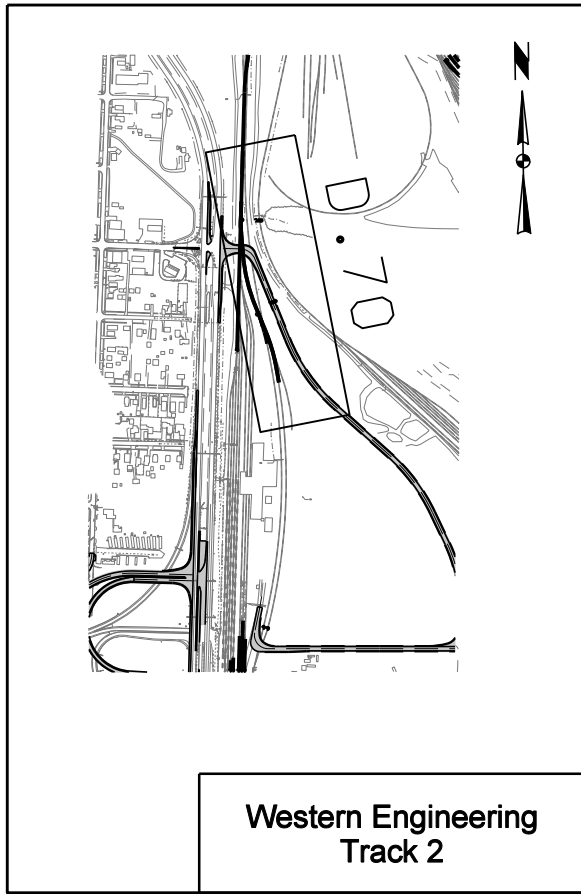


SIRE Crossover

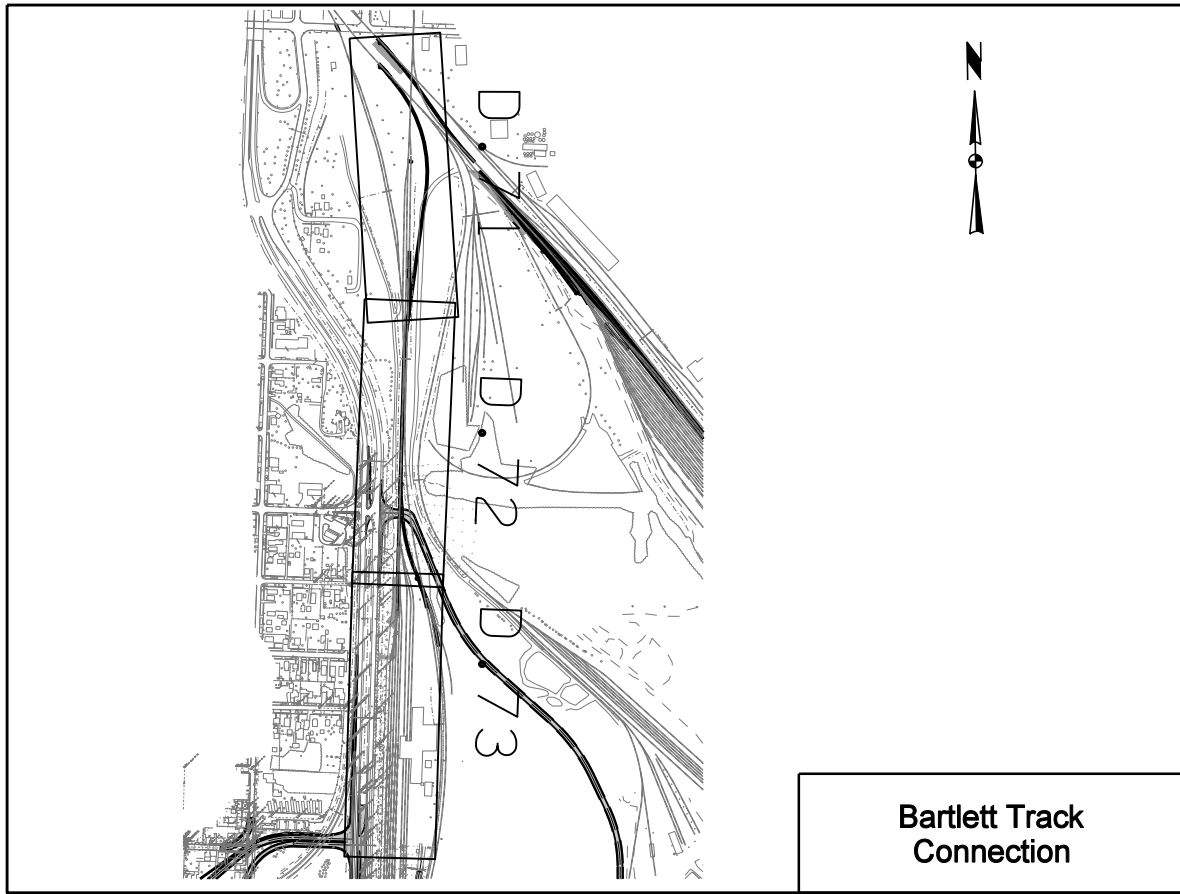
PROJECT KEY MAP



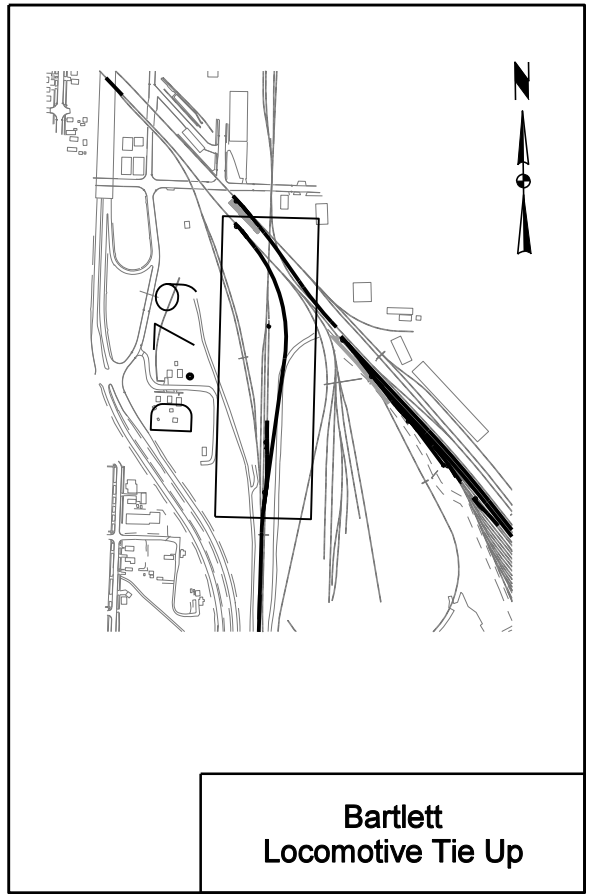
Western Engineering
Trackage



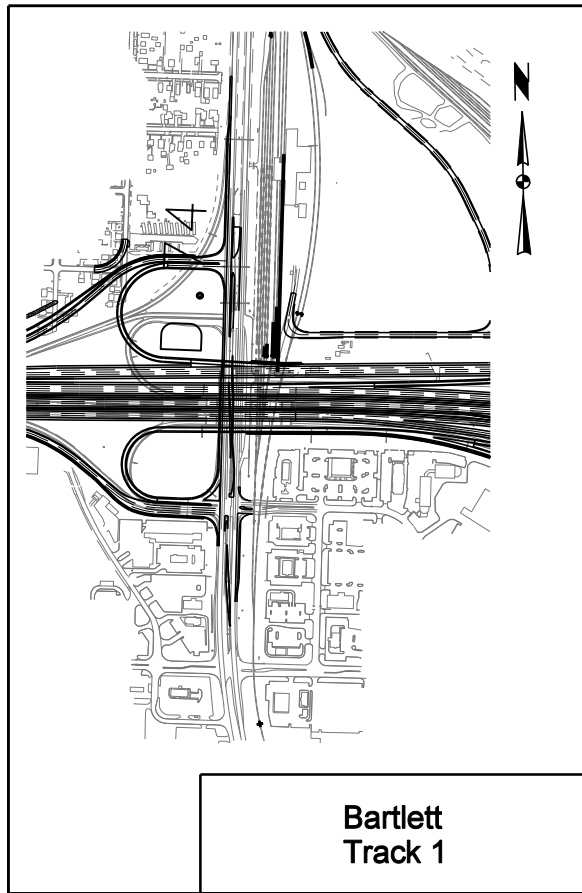
Western Engineering
Track 2



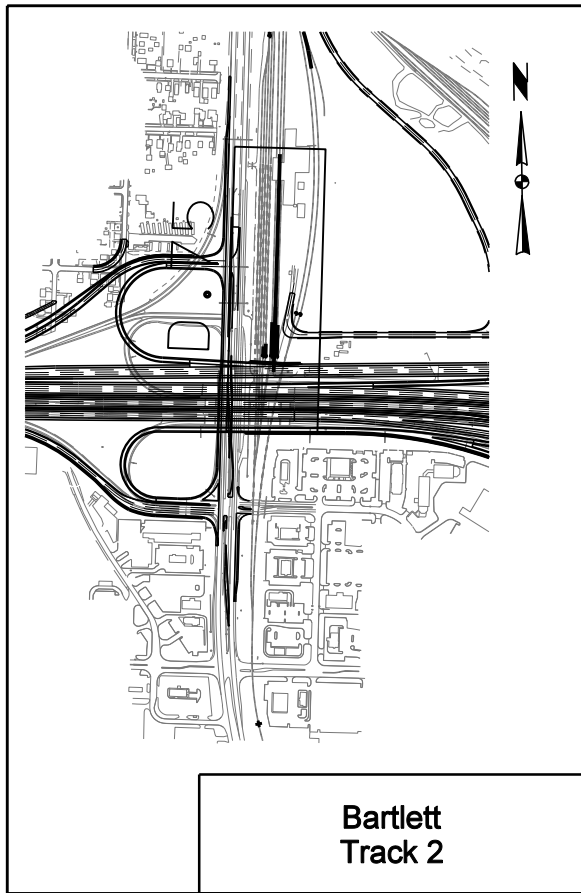
Bartlett Track
Connection



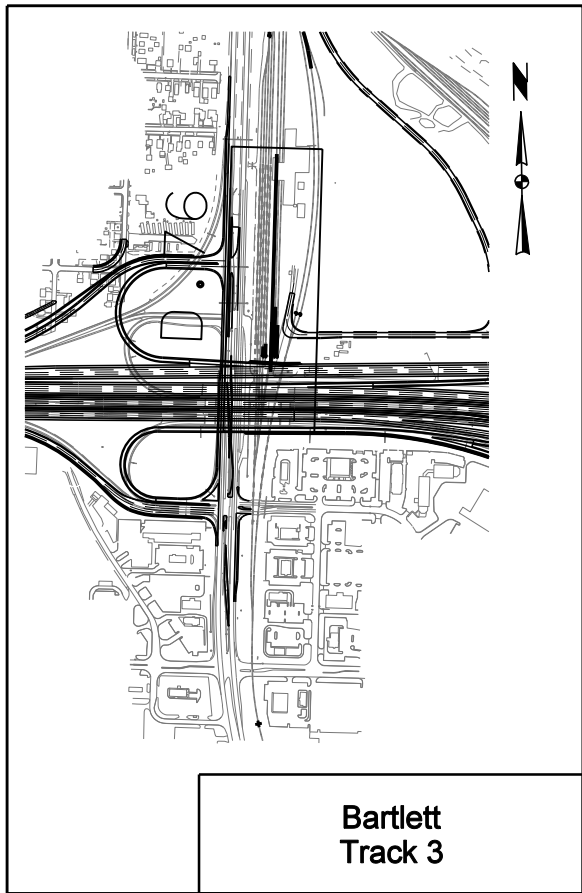
Bartlett
Locomotive Tie Up



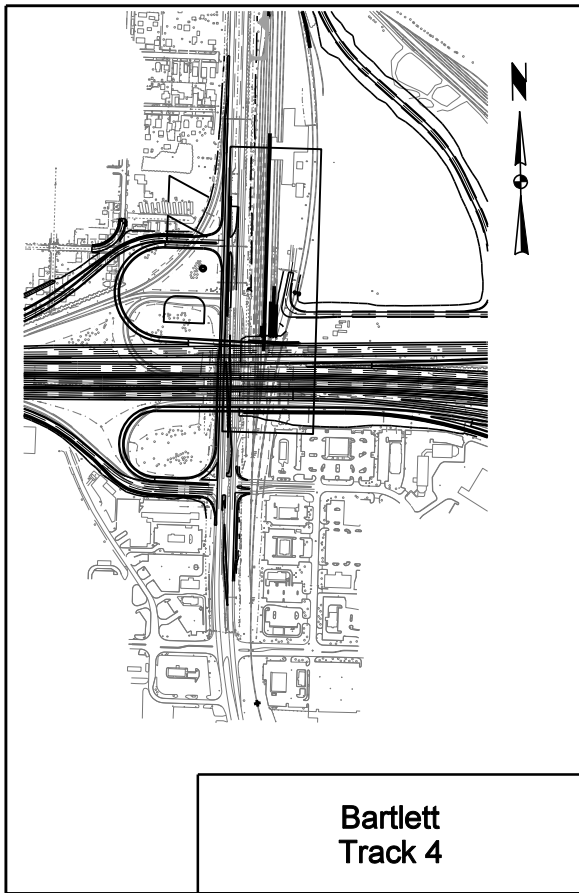
Bartlett
Track 1



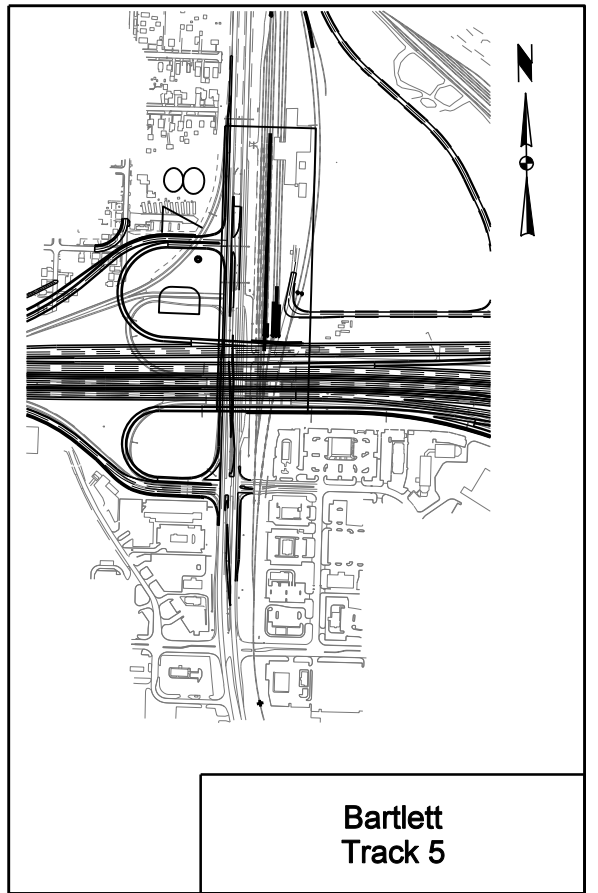
Bartlett
Track 2



Bartlett
Track 3

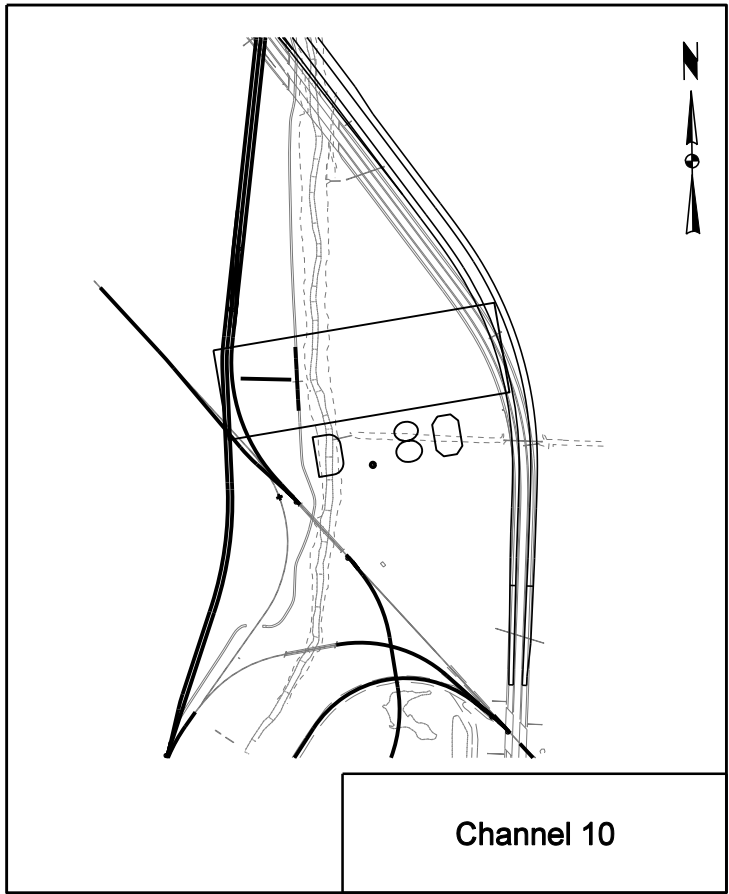


Bartlett
Track 4

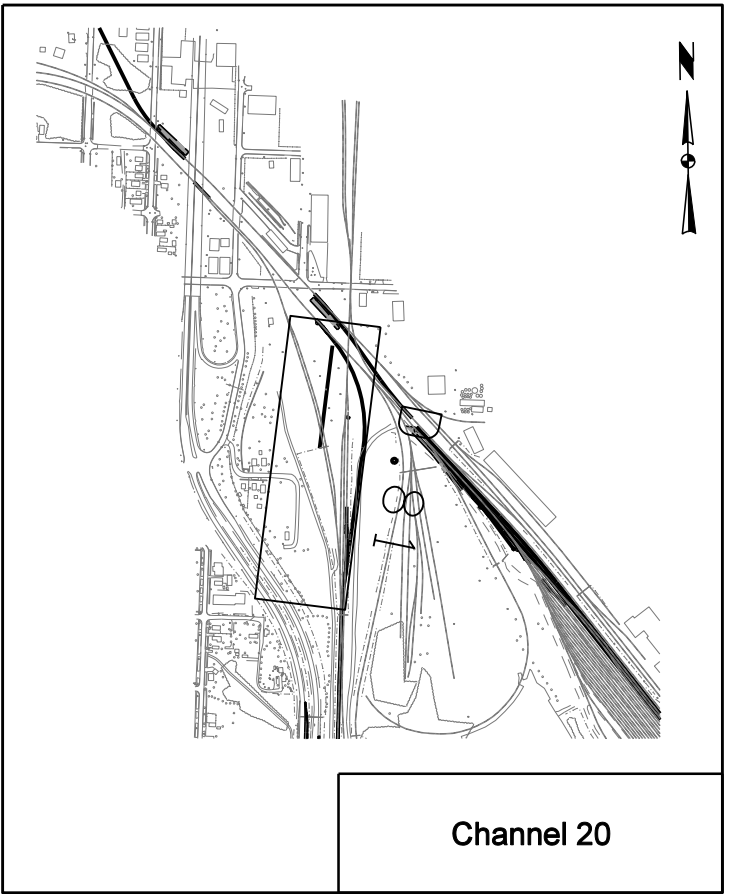


Bartlett
Track 5

PROJECT KEY MAP



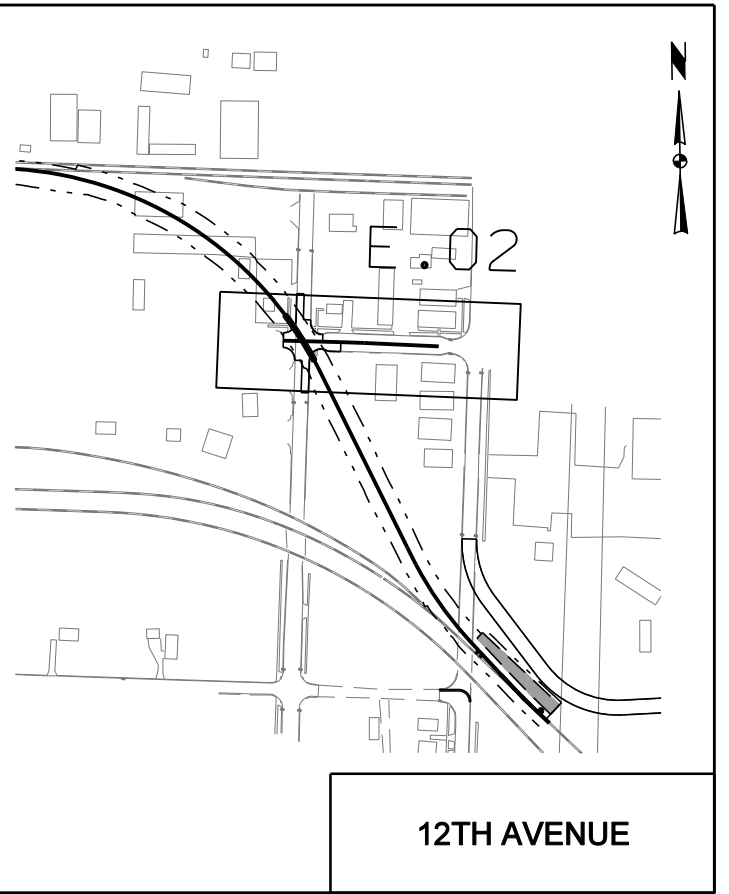
Channel 10



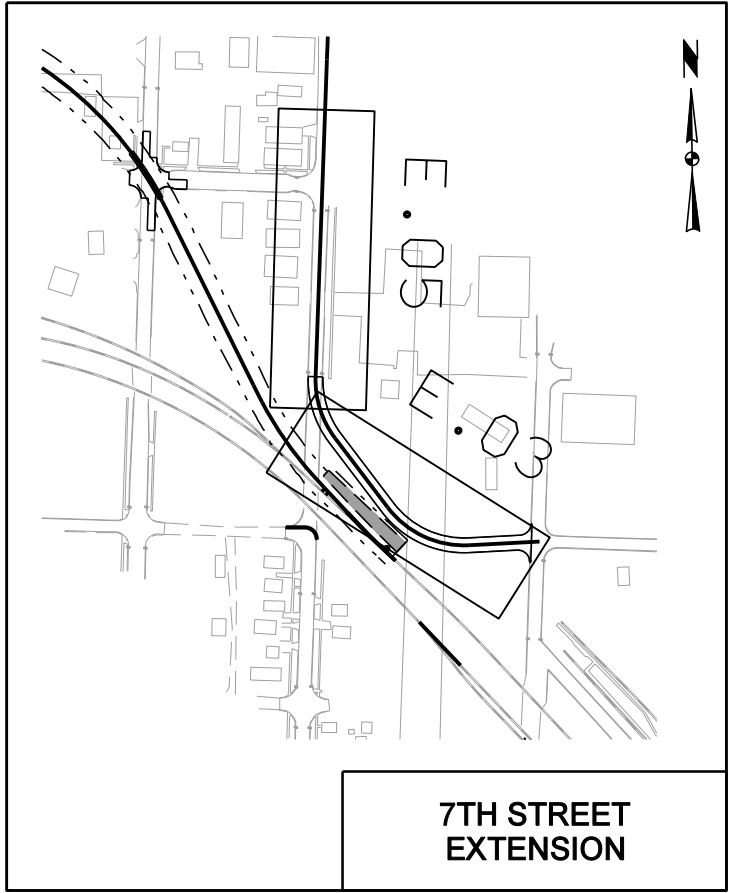
Channel 20



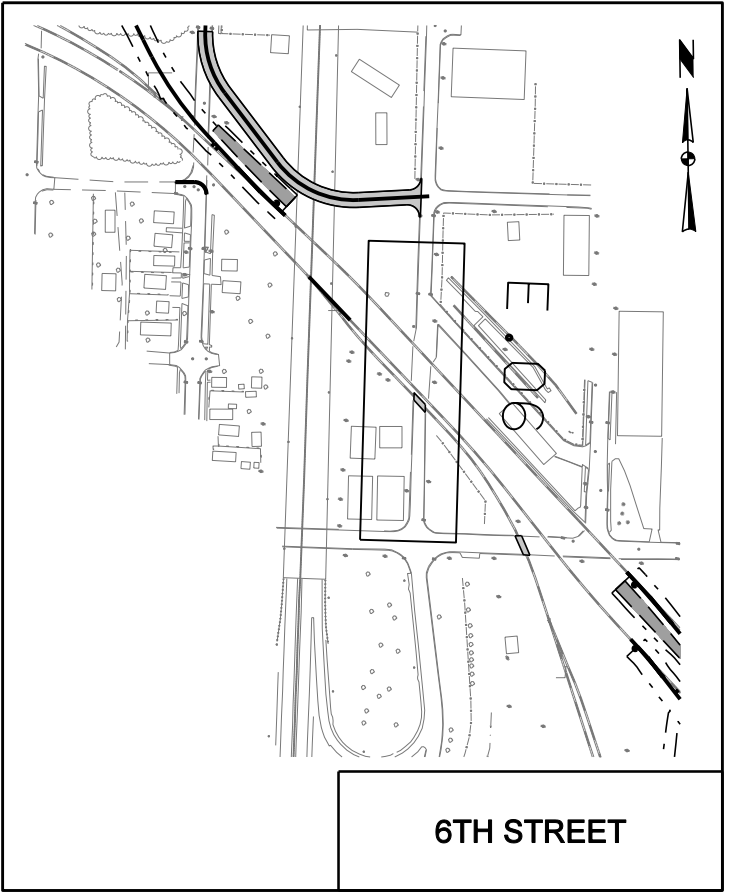
8TH STREET



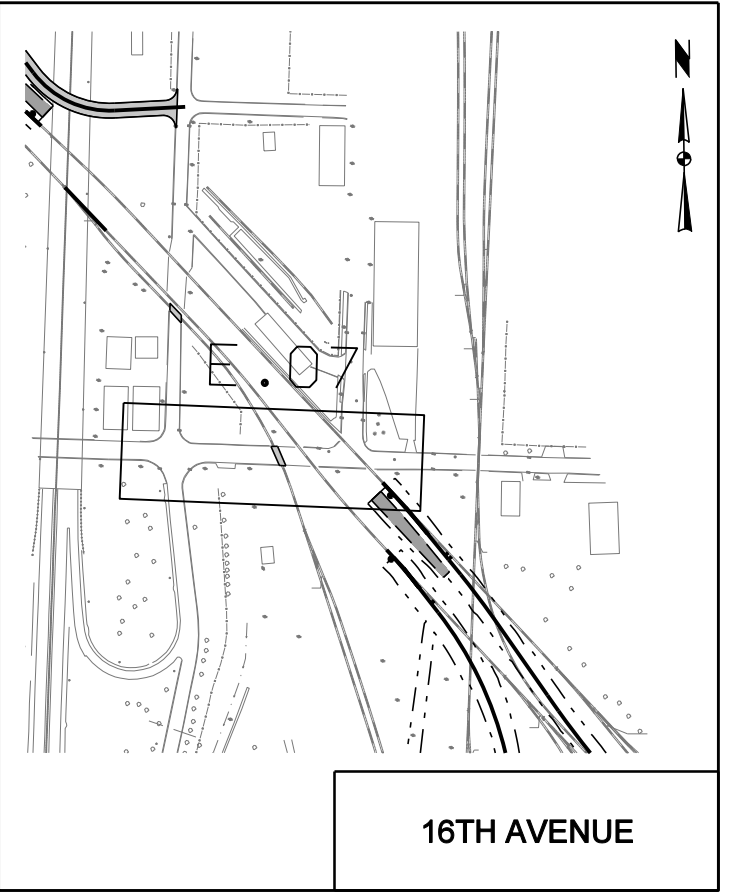
12TH AVENUE



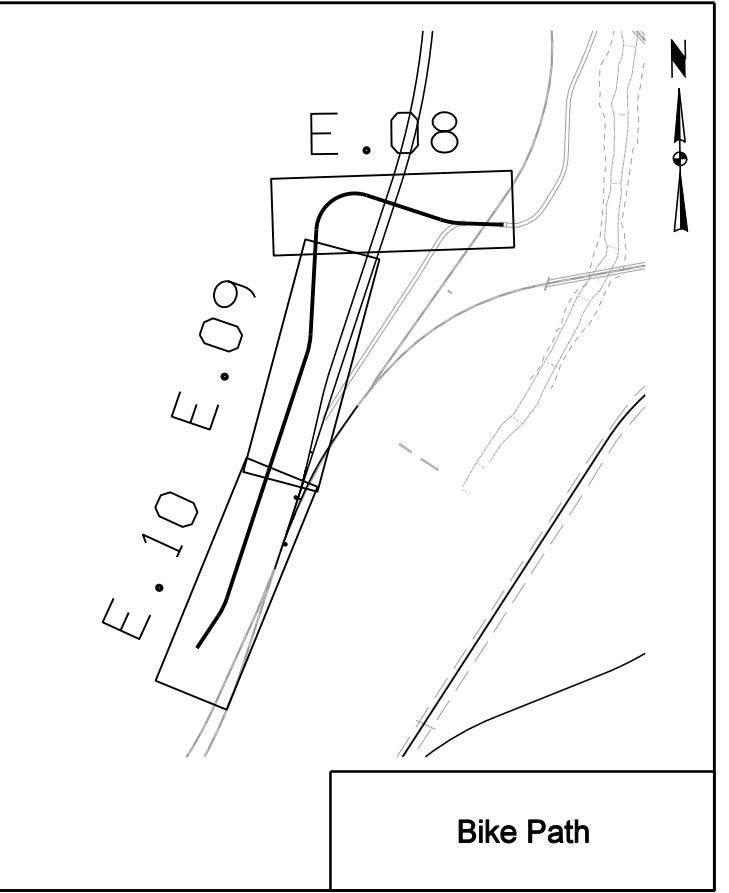
7TH STREET
EXTENSION



6TH STREET



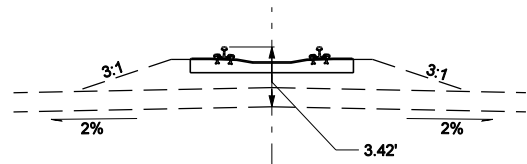
16TH AVENUE



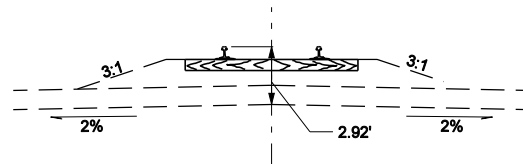
Bike Path

PROJECT KEY MAP

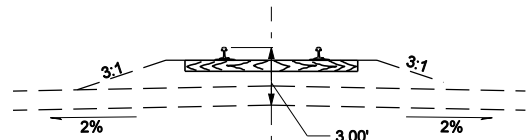




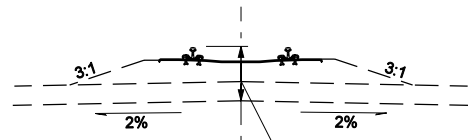
TYPICAL TRACK SECTION
136# / 141# RAIL ON CONCRETE TIE
(12" MIN. BALLAST / 12" MIN. SUBBALLAST)



TYPICAL TRACK SECTION
115# RAIL ON WOOD TIE
(8" MIN. BALLAST / 12" MIN. SUBBALLAST)



TYPICAL TRACK SECTION
136# RAIL ON WOOD TIE
(12" MIN. BALLAST / 12" MIN. SUBBALLAST)



TYPICAL TRACK SECTION
136# RAIL ON STEEL TIE
(12" MIN. BALLAST / 12" MIN. SUBBALLAST)

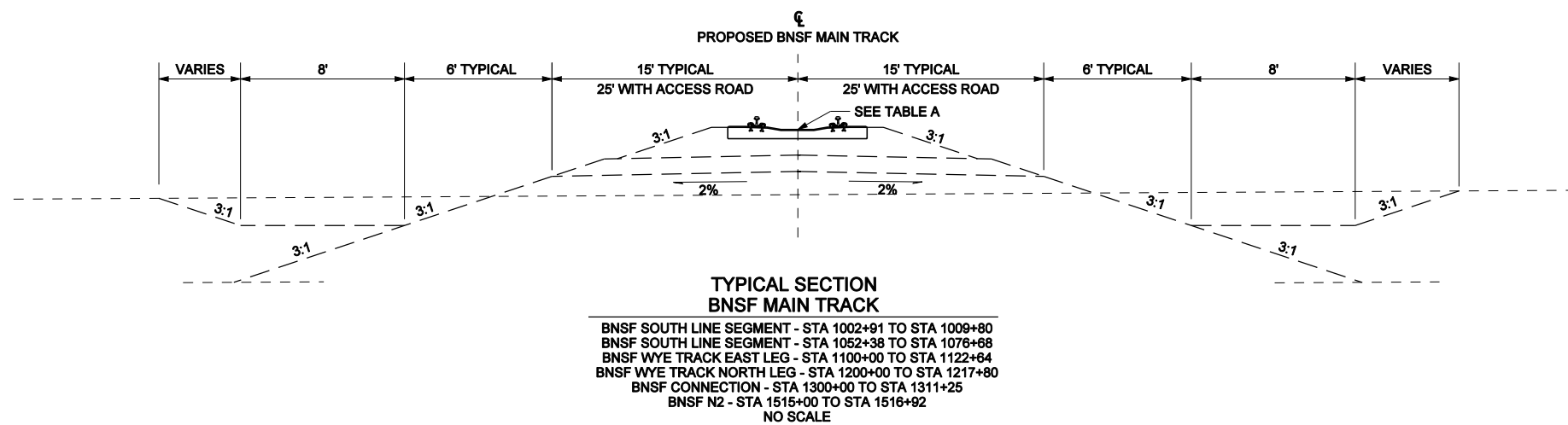
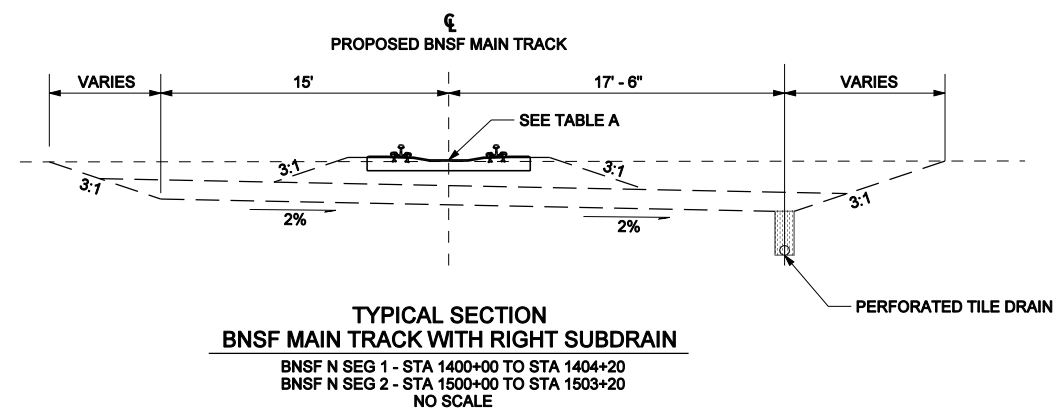
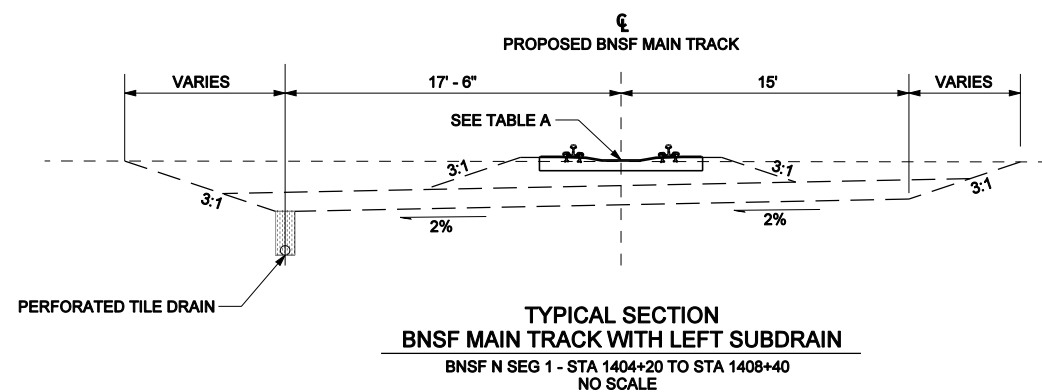
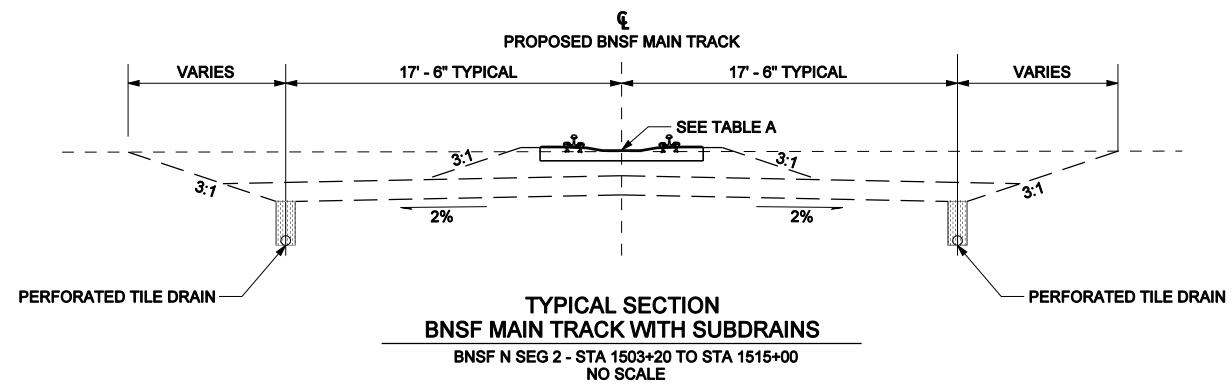
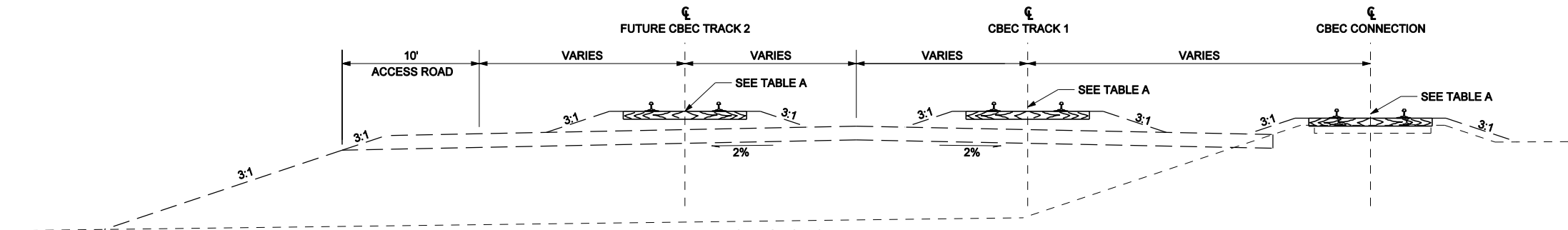
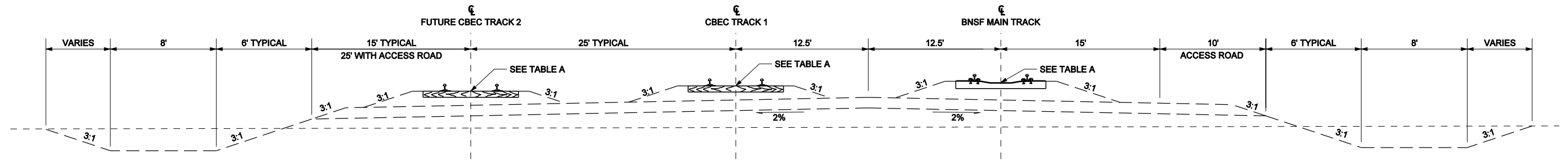


TABLE A

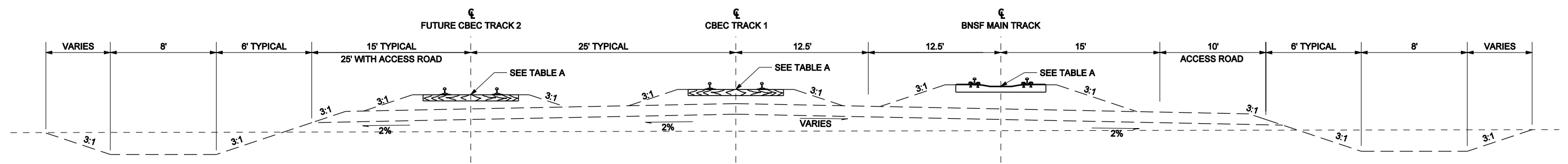
RAILROAD	WEIGHT OF RAIL	TYPE OF TIE	BALLAST DEPTH	SUBBALLAST DEPTH	SHOULDER WIDTH
BNSF	136 LB ON TANGENT 141 LB ON CURVES	8'-6" CONCRETE	12"	12"	18"
BNSF	136 LB	7'x9'x9' WOOD	8"	12"	12"
CBEC	136 LB	7'x9'x9' WOOD	8"	12"	12"
IAIS	115 LB	7'x9'x9' WOOD	8"	12"	9"
WESTERN	115 LB	7'x9'x9' WOOD	8"	12"	9"
BARTLETT	115 LB	7'x9'x9' WOOD	8"	12"	9"
SIRE	136 LB	STEEL	12" (MEASURED FROM TOP OF TIE)	12"	12"



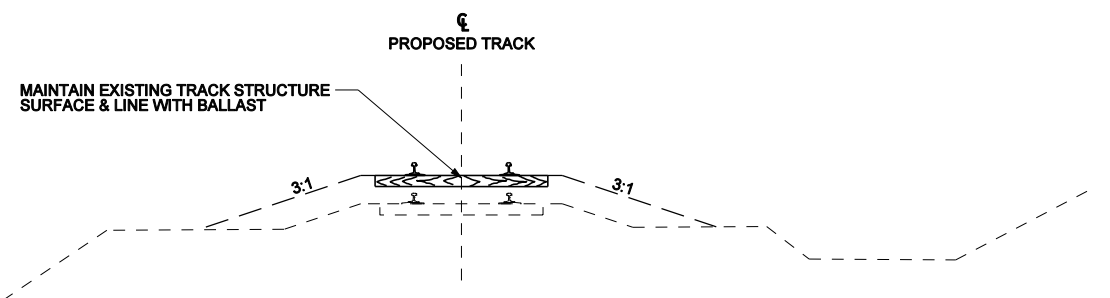
**TYPICAL SECTION
3 TRACK CBEC CORRIDOR**
 CBEC MAIN TRACK - STA 2000+00 TO STA 2005+50
 CBEC FUTURE 2ND MAIN EXTENSION - STA 2200+00 TO STA 2203+56
 CBEC CONNECTION - STA 2300+00 TO STA 2304+09
 NO SCALE



**TYPICAL SECTION
3 TRACK MOSQUITO CREEK CORRIDOR**
 BNSF SOUTH LINE SEGMENT - STA 1019+80 TO STA 1052+38
 CBEC MAIN TRACK - STA 2035+00 TO STA 2067+50
 CBEC FUTURE 2ND MAIN TRACK - STA 2108+00 TO STA 2140+39
 NO SCALE

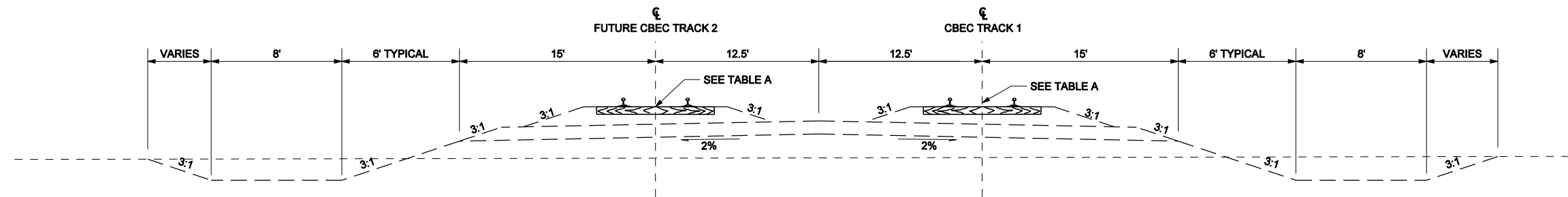


**TYPICAL SECTION
3 TRACK MOSQUITO CREEK CORRIDOR**
 BNSF SOUTH LINE SEGMENT - STA 1009+80 TO STA 1019+80
 CBEC MAIN TRACK - STA 2025+00 TO STA 2035+00
 CBEC FUTURE 2ND MAIN TRACK - STA 2100+00 TO STA 2108+00
 CBEC FUTURE 2ND MAIN EXTENSION - STA 2223+00 TO STA 2230+50
 NO SCALE

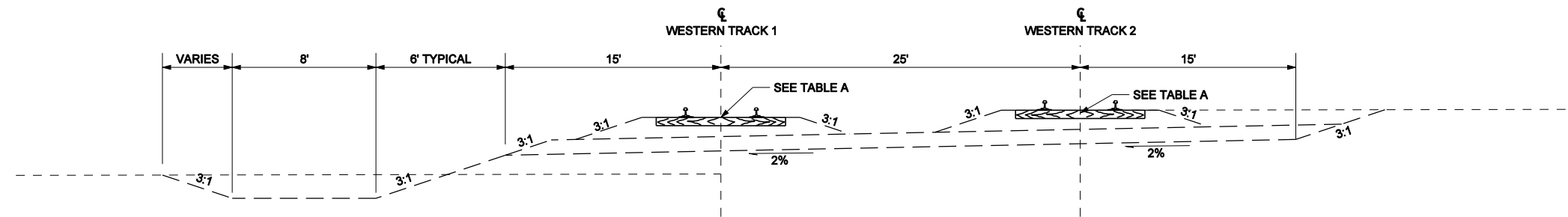


**TYPICAL SECTION
SURFACE & LINE TRACK**
 (BALLAST ONLY - UTILIZE EXISTING TRACK AND TRACK BED)
 BNSF SOUTH LINE SEGMENT - STA 1000+00 - 1002+91
 BNSF SOUTH LINE SEGMENT - STA 1078+68 - 1078+48
 BNSF WYE EAST LEG - STA 1122+84 TO STA 1130+00
 BNSF NORTH SEGMENT 2 - STA 1518+92 TO STA 1526+00
 CBEC RAISE - STA 2400+00 TO STA 2411+00
 NO SCALE

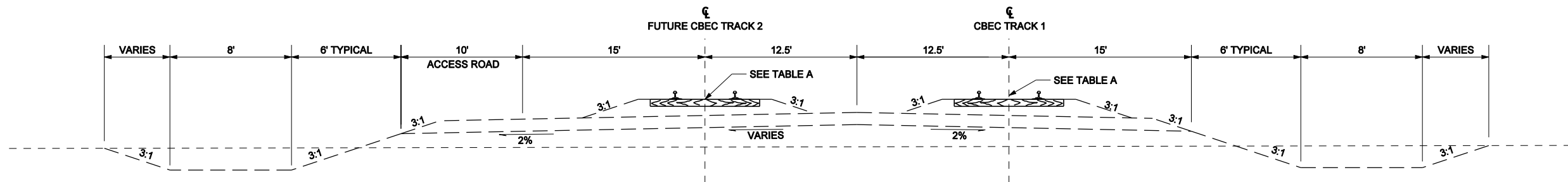
TABLE A					
RAILROAD	WEIGHT OF RAIL	TYPE OF TIE	BALLAST DEPTH	SUBBALLAST DEPTH	SHOULDER WIDTH
BNSF	136 LB ON TANGENT 141 LB ON CURVES	8'-6" CONCRETE	12"	12"	18"
BNSF	136 LB	7"x9"x9' WOOD	8"	12"	12"
CBEC	136 LB	7"x9"x9' WOOD	8"	12"	12"
IAIS	115 LB	7"x9"x9' WOOD	8"	12"	9"
WESTERN	115 LB	7"x9"x9' WOOD	8"	12"	9"
BARTLETT	115 LB	7"x9"x9' WOOD	8"	12"	9"
SIRE	136 LB	STEEL	12" (MEASURED FROM TOP OF TIE)	12"	12"



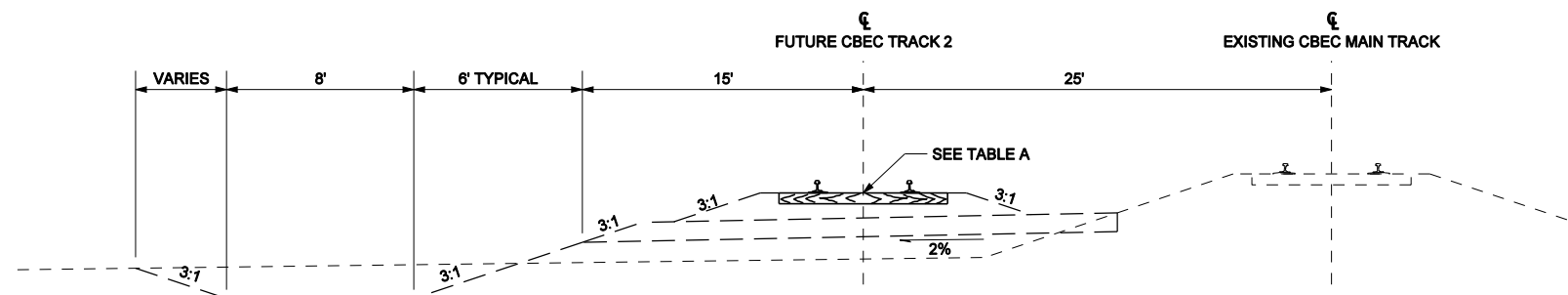
TYPICAL SECTION
2 TRACK CBEC CORRIDOR WITHOUT ROAD
 CBEC MAIN TRACK - STA 2067+50 TO STA 2089+00
 CBEC FUTURE 2ND MAIN TRACK - STA 2140+39 TO STA 2161+73
 NO SCALE



TYPICAL SECTION
2 TRACK WESTERN ENGINEERING - LEFT DITCH
 WESTERN ENGINEERING - STA 5005+30 TO STA 5007+43
 NO SCALE



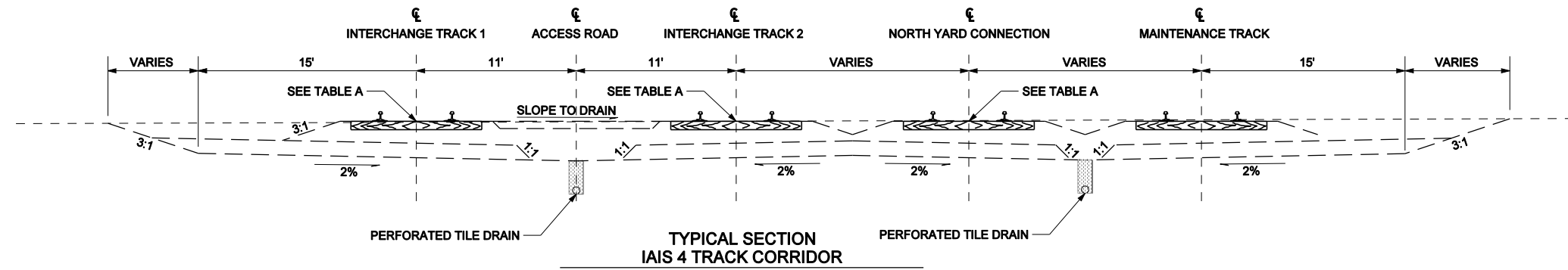
TYPICAL SECTION
2 TRACK CBEC CORRIDOR WITH ROAD
 CBEC MAIN TRACK - STA 2005+50 TO STA 2025+00
 CBEC FUTURE 2ND MAIN EXTENSION - STA 2203+56 TO STA 2223+00
 NO SCALE



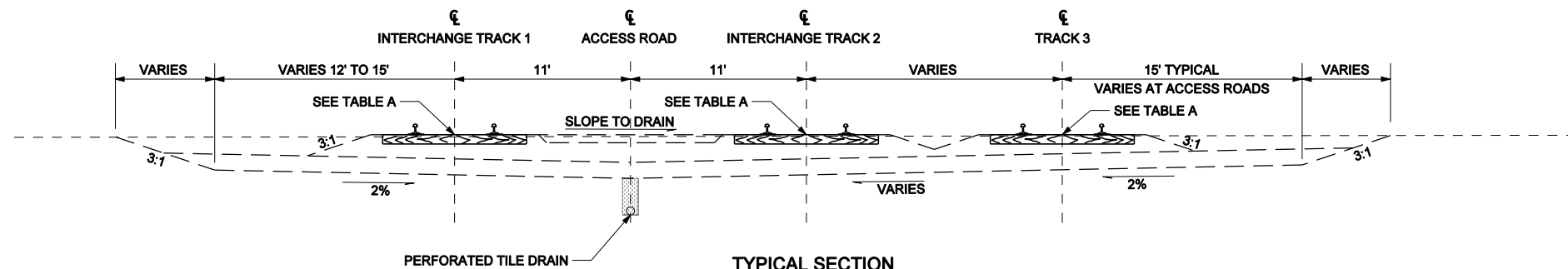
TYPICAL SECTION
CBEC FUTURE 2ND MAIN TRACK
 CBEC FUTURE 2ND MAIN TRACK - STA 2161+73 TO STA 2190+15
 NO SCALE

TABLE A

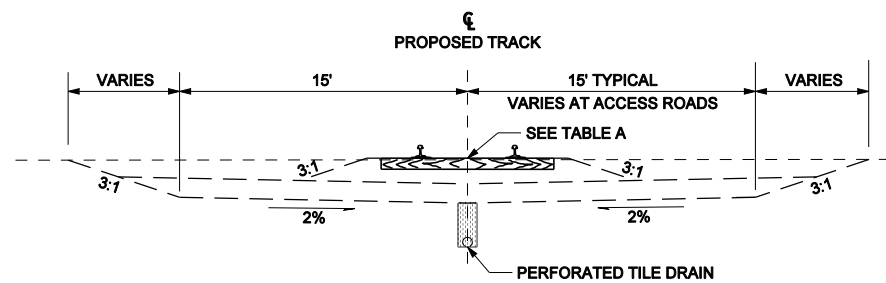
RAILROAD	WEIGHT OF RAIL	TYPE OF TIE	BALLAST DEPTH	SUBBALLAST DEPTH	SHOULDER WIDTH
BNSF	136 LB ON TANGENT 141 LB ON CURVES	8'-6" CONCRETE	12"	12"	18"
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BARTLETT	115 LB	7"x9"x9' WOOD	8"	12"	9"
SIRE	136 LB	STEEL	12" (MEASURED FROM TOP OF TIE)	12"	12"



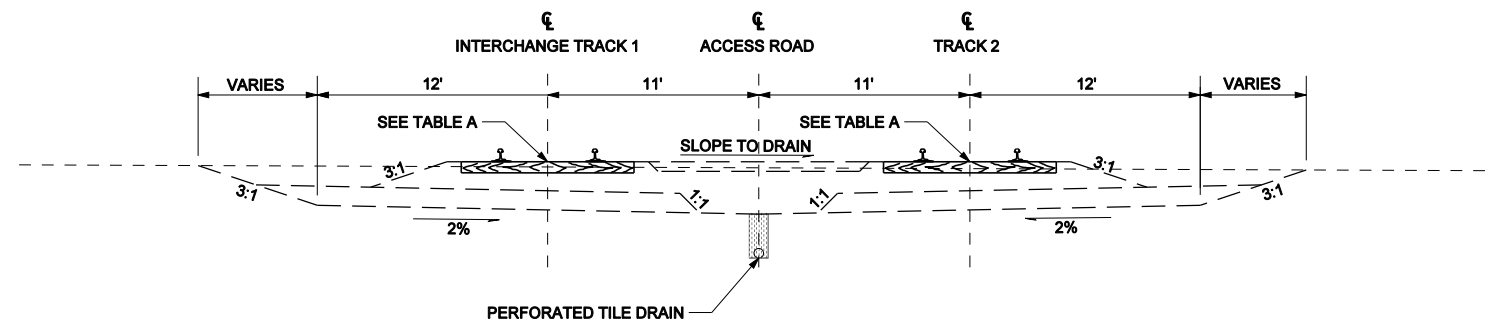
IAIS INTERCHANGE TRACK 1 - STA 3005+41 TO STA 3008+42
 IAIS INTERCHANGE TRACK 2 - STA 3103+00 TO STA 3106+00
 IAIS NORTH YARD CONNECTION - STA 3205+43 TO STA 3208+45
 IAIS MAINTENANCE TRACK - STA 3300+00 TO STA 3303+00
 NO SCALE



IAIS INTERCHANGE TRACK 1 - STA 3002+41 TO STA 3005+41
 IAIS INTERCHANGE TRACK 1 - STA 3008+42 TO STA 3009+82
 IAIS INTERCHANGE TRACK 1 - STA 3010+80 TO STA 3012+89
 IAIS INTERCHANGE TRACK 1 - STA 3050+07 TO STA 3057+37
 IAIS INTERCHANGE TRACK 2 - STA 3100+00 TO STA 3103+00
 IAIS INTERCHANGE TRACK 2 - STA 3106+00 TO STA 3107+19
 IAIS INTERCHANGE TRACK 2 - STA 3108+37 TO STA 3110+45
 IAIS INTERCHANGE TRACK 2 - STA 3147+84 TO STA 3154+94
 IAIS NORTH YARD CONNECTION - STA 3202+43 TO STA 3205+43
 IAIS NORTH YARD CONNECTION - STA 3208+45 TO STA 3209+82
 IAIS TRACK 4 CONNECTION - STA 3400+00 TO STA 3402+09
 IAIS SOUTH YARD CONNECTION - STA 3500+00 TO STA 3507+30
 NO SCALE



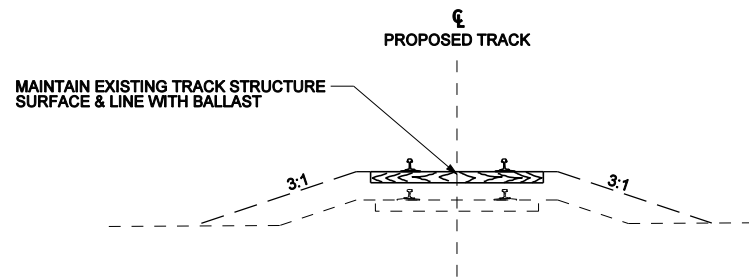
IAIS INTERCHANGE TRACK 2 - STA 3162+42 TO STA 3164+07
 NO SCALE



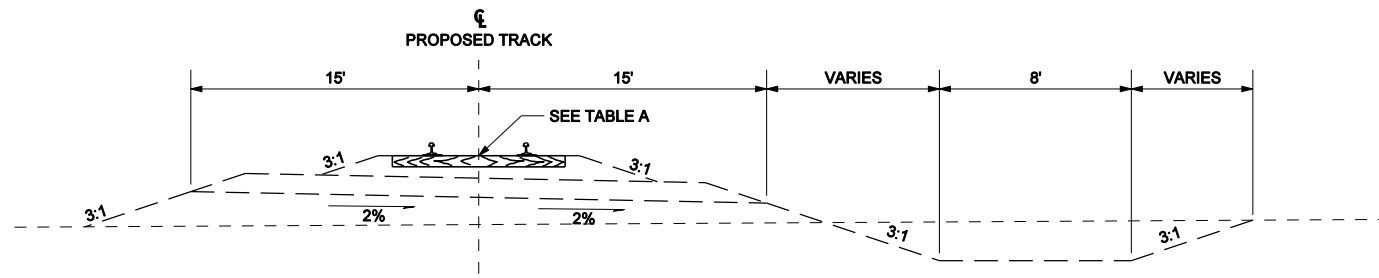
IAIS INTERCHANGE TRACK 1 - STA 3000+00 TO STA 3002+41
 IAIS INTERCHANGE TRACK 1 - STA 3009+82 TO STA 3010+80
 IAIS INTERCHANGE TRACK 1 - STA 3012+89 TO STA 3050+07
 IAIS INTERCHANGE TRACK 1 - STA 3057+37 TO STA 3064+84
 IAIS INTERCHANGE TRACK 2 - STA 3107+19 TO STA 3108+37
 IAIS INTERCHANGE TRACK 2 - STA 3110+45 TO STA 3147+84
 IAIS INTERCHANGE TRACK 2 - STA 3154+94 TO STA 3162+42
 IAIS NORTH YARD CONNECTION - STA 3200+00 TO STA 3202+43
 NO SCALE

TABLE A

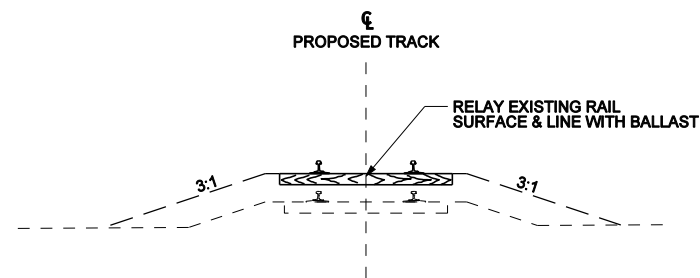
RAILROAD	WEIGHT OF RAIL	TYPE OF TIE	BALLAST DEPTH	SUBBALLAST DEPTH	SHOULDER WIDTH
BNSF	136 LB ON TANGENT 141 LB ON CURVES	8'-6" CONCRETE	12"	12"	18"
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BARTLETT	115 LB	7"x9"x9' WOOD	8"	12"	9"
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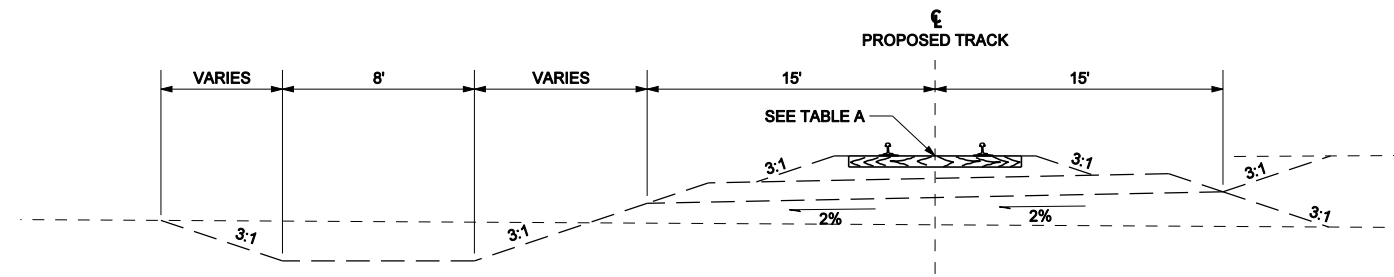
**TYPICAL SECTION
SURFACE & LINE TRACK**
(BALLAST ONLY - UTILIZE EXISTING TRACK AND TRACK BED)
BARTLETT LOCOMOTIVE TIE-UP - STA 6600+00 TO STA 6603+74
WESTERN ENGINEERING - STA 5000+00 TO STA 5001+08
NO SCALE



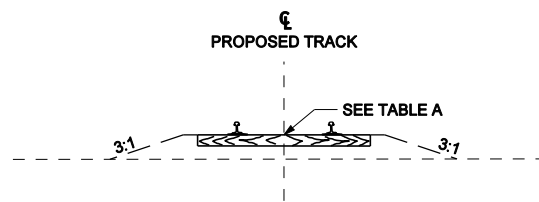
**TYPICAL SECTION
BARTLETT CONNECTION - RIGHT DITCH**
BARTLETT TRACK CON - STA 6000+00 TO STA 6003+00
NO SCALE



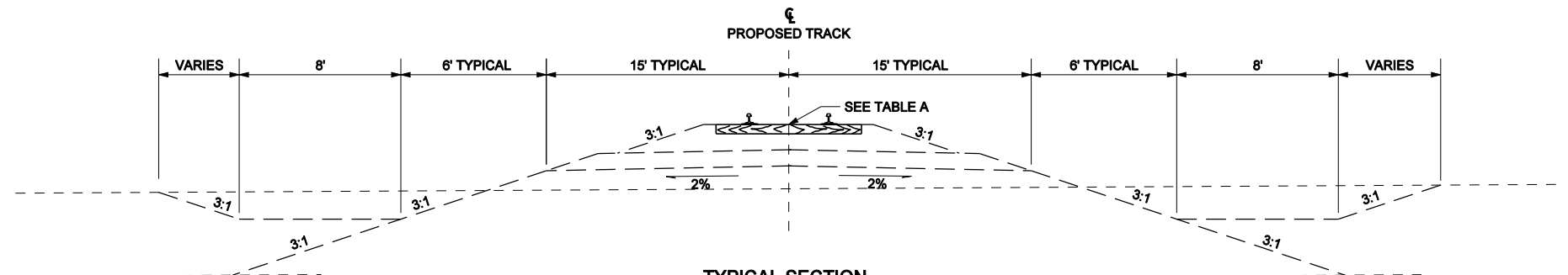
**TYPICAL SECTION
RELAY, SURFACE & LINE TRACK**
(UTILIZE EXISTING TIES AND TRACK BED)
BARTLETT CONNECTION - STA 6016+77 TO STA 6030+97
NO SCALE



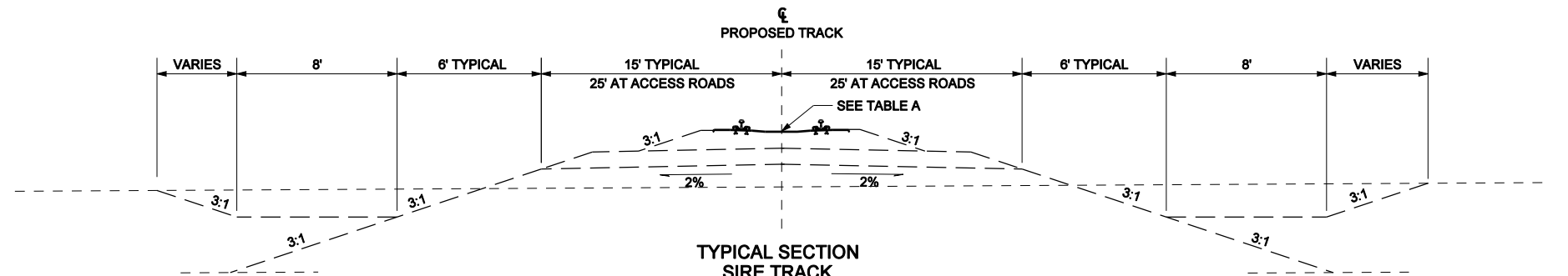
**TYPICAL SECTION
BARTLETT CONNECTION - LEFT DITCH**
BARTLETT TRACK CON - STA 6003+00 TO STA 6014+41
WESTERN ENGINEERING - STA 5001+08 TO STA 5005+30
WESTERN ENGINEERING - STA 5007+43 TO STA 5008+25
NO SCALE



**TYPICAL SECTION
BARTLETT TRACK ON EXISTING SUBGRADE**
BARTLETT TRACK 1 - STA 6108+40 TO STA 6110+18
BARTLETT TRACK 2 - STA 6207+40 TO STA 6210+18
BARTLETT TRACK 3 - STA 6308+25 TO STA 6310+18
BARTLETT TRACK 4 - STA 6409+45 TO STA 6410+18
BARTLETT TRACK 5 - STA 6509+60 TO STA 6510+18
NO SCALE



**TYPICAL SECTION
SINGLE INDUSTRIAL TRACK**
BARTLETT TRACK CON - STA 6015+40 TO STA 6016+77
NO SCALE

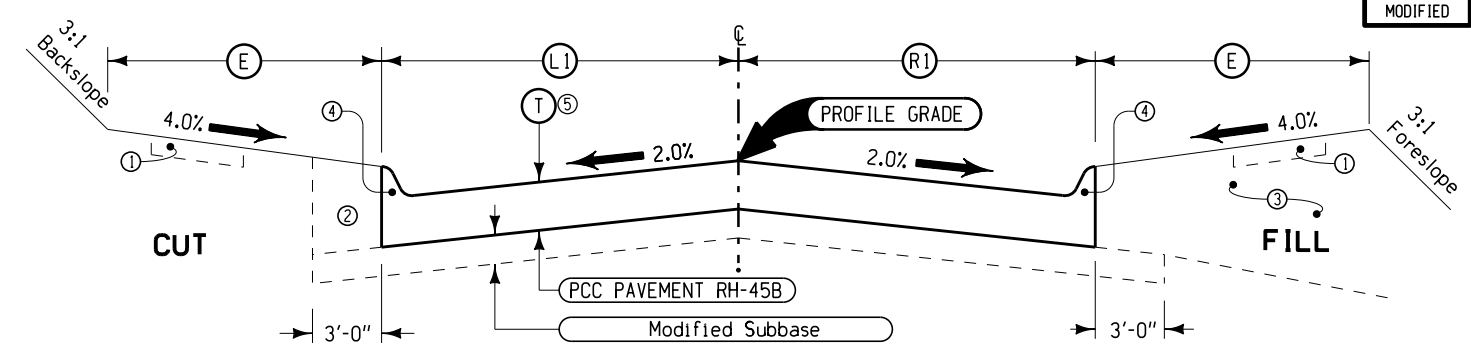


**TYPICAL SECTION
SIRE TRACK**
SIRE - STA 4000+00 TO STA 4026+46
SIRE TRACK RAISE - STA 4100+00 TO STA 4123+98
UTILIZE EXISTING RAIL AND TIES FOR TRACK RAISE
NO SCALE

TABLE A

RAILROAD	WEIGHT OF RAIL	TYPE OF TIE	BALLAST DEPTH	SUBBALLAST DEPTH	SHOULDER WIDTH
BNSF	136 LB ON TANGENT 141 LB ON CURVES	8'-6" CONCRETE	12"	12"	18"
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BARTLETT	115 LB	7"x9"x9' WOOD	8"	12"	9"
SIRE	136 LB	STEEL	12" (MEASURED FROM TOP OF TIE)	12"	12"

2209A
MODIFIED



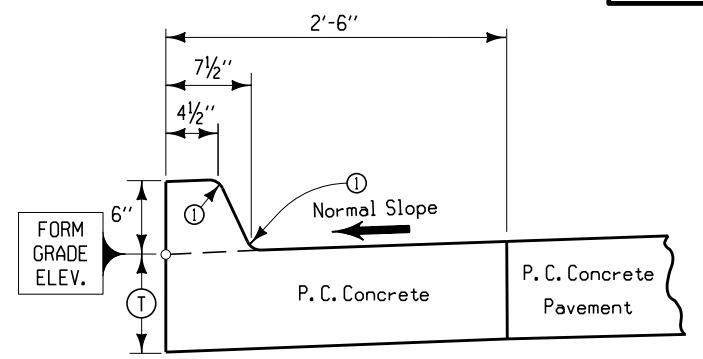
**TYPICAL CROSS SECTION
2 LANE CURB SECTION**

Normal section shown may be appropriately modified for areas specifically designated by the engineer such as intersections or superelevated curves.

Location		L1	R1	T	E
Road Identification	Station to Station	Feet	Feet	Inches	Feet
8TH ST.	10012+33.53 10013+00.53	---	15.5	XX	3
8TH ST.	10013+00.53 10013+85.55	15.5	15.5	XX	3
8TH ST.	10013+85.55 10014+39.55	15.5	---	XX	3
12TH AVE.	10020+00.00 10020+82.00	16.6-15.5	14.1-15.5	XX	3
12TH AVE.	10020+82.00 10020+96.67	---	15.5-20.0	XX	3
12TH AVE.	10020+96.67 10021+20.00	---	20.0	XX	3
7TH ST.	10100+17.00 10106+59.94	15.5	15.5	XX	7

- ① Refer to other drawings for details of possible sidewalk construction
- ② Excavate and backfill 3.0'
- ③ Backfill
- ④ 6" Standard Curb
- ⑤ Pavement thickness yet to be determined

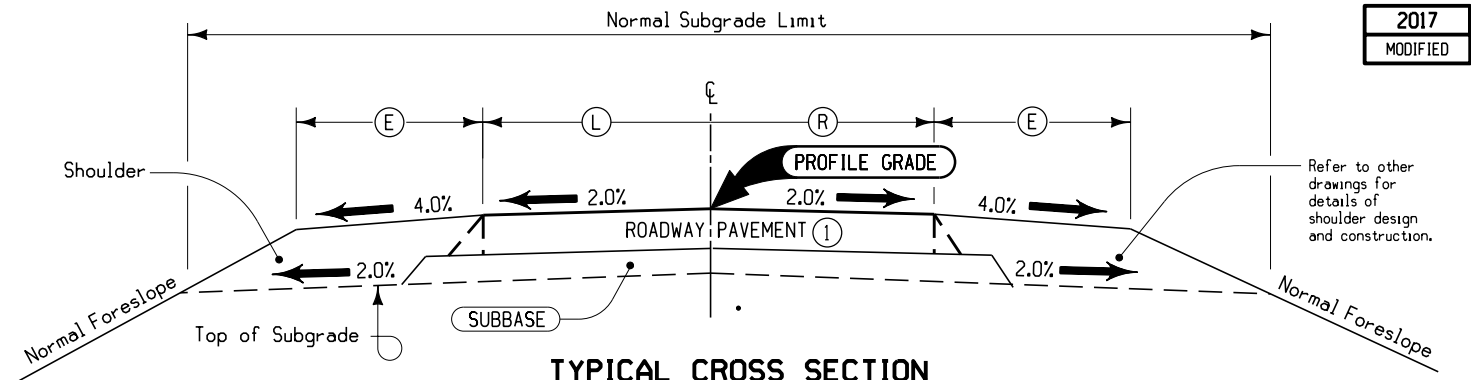
6131
11-10-92



- Ⓣ Thickness specified for Pavement
- Ⓛ 3" Radius

**CURB AND GUTTER UNIT
(STANDARD CURB - ADJACENT TO P.C.C.)**

2017
MODIFIED



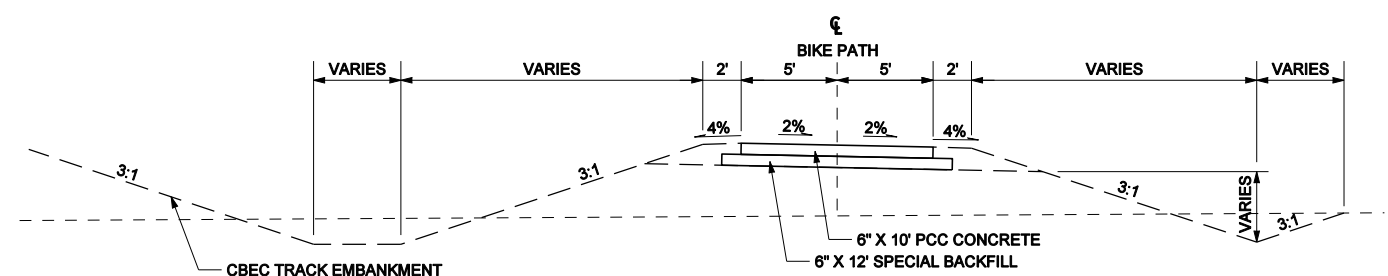
**TYPICAL CROSS SECTION
2-LANE ROADWAY**

Note:
Normal sections shown may be appropriately modified for areas specifically designated by the Engineer, such as intersections or superelevated curves.

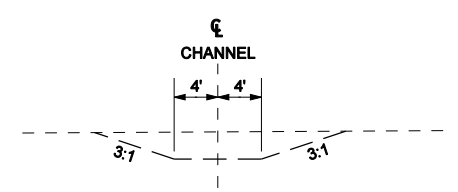
LOCATION		L	R	E
ROAD IDENTIFICATION	STATION TO STATION	Feet	Feet	Feet
6TH ST.	10052+78.32 10052+94.13	16.87-16.89	7.67-7.26	3.0
16TH AVE.	10042+82.13 10042+95.89	19.25-20.14	19.56-20.12	3.0

- ① Pavement type and thickness yet to be determined.

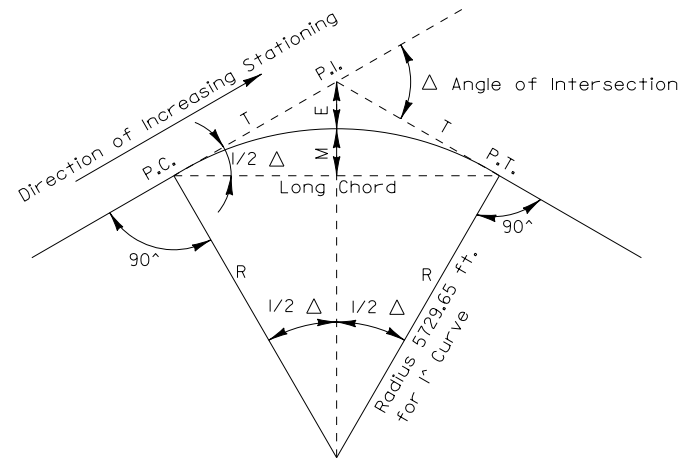
Refer to other drawings for details of shoulder design and construction.



**TYPICAL SECTION
BIKE PATH**
BIKE PATH - STA 500+00 TO STA 514+98
NO SCALE



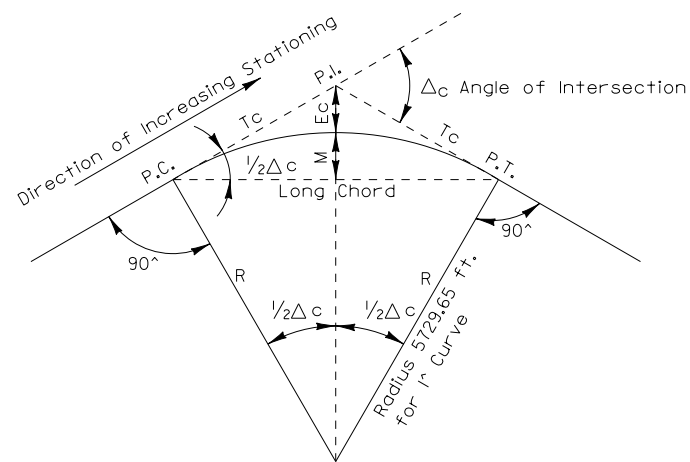
**TYPICAL SECTION
DRAINAGE CHANNEL**
CHANNEL 10 - STA 10+00 TO STA 12+77
CHANNEL 20 - STA 20+00 TO STA 25+69
NO SCALE



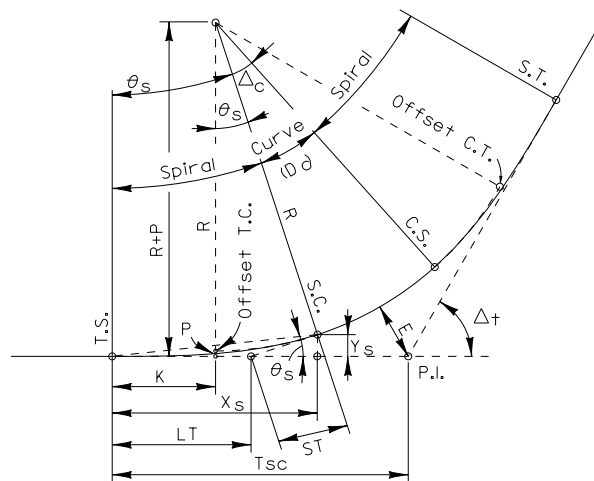
Radius: $R = \frac{50}{\sin (1/2 D)}$
 Length of Curve: $L = 100 \frac{\Delta}{D}$
 also $L = .0174533 \times \Delta \times R$
 Degree of Curve: $D = 100 \frac{\Delta}{L}$
 also $\sin (1/2 D) = \frac{50}{R}$
 Tangent: $T = R \tan (1/2 \Delta)$
 Long Chord: $LC = 2R \sin (1/2 \Delta)$
 Middle Ordinate: $M = R (1 - \cos (1/2 \Delta))$
 External: $E = T \tan (1/4 \Delta)$

HORIZONTAL CURVE FORMULAE

Using Chord Definition
Curve w/o Spirals



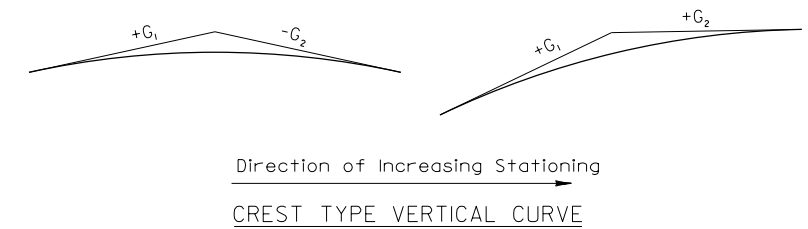
$\Delta_t =$ Total Angle
 $\theta_s =$ Spiral Angle = $L_s D_c / 200$
 $\Delta_c =$ Circular Curve Angle
 $\Delta_t =$ Total Curve Angle (Spiral + Curve + Spiral)
 $D_c =$ Degree of Circular Curve = $100 \frac{\Delta_c}{L_c}$, also $\sin (1/2 D_c) = \frac{50}{R}$
 $L_s =$ Length of Spiral Curve
 $L_c =$ Length of Circular Curve = $100 \frac{\Delta_c}{D_c}$
 $LC =$ Long Chord of Circular Curve = $2R \sin (1/2 \Delta_c)$
 $M =$ Middle Ordinate of Circular Curve = $R(1 - \cos (1/2 \Delta_c))$
 $R =$ Radius of Circular Curve = $50 / (\sin (D_c/2))$
 $T_c =$ Tangent of Circular Curve = $R \tan (\Delta_c/2)$
 $T_{sc} =$ Total Tangent Length (SPIRAL - CURVE - SPIRAL)
 $LT =$ Long Tangent of Spiral Curve
 $ST =$ Short Tangent of Spiral Curve
 $K, P =$ Coordinates of Offset Point Referred to Total Tangent as X-Axis and TS as Origin
 $X_s, Y_s =$ Coordinates of S.C. Point Referred to Total Tangent as X-Axis and TS as Origin
 $E =$ External Distance from Circular Curve to Point of Intersection for Total Curve



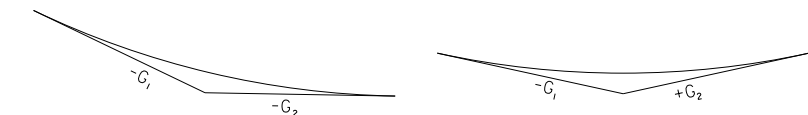
SPIRAL - CURVE - SPIRAL

HORIZONTAL CURVE FORMULAE

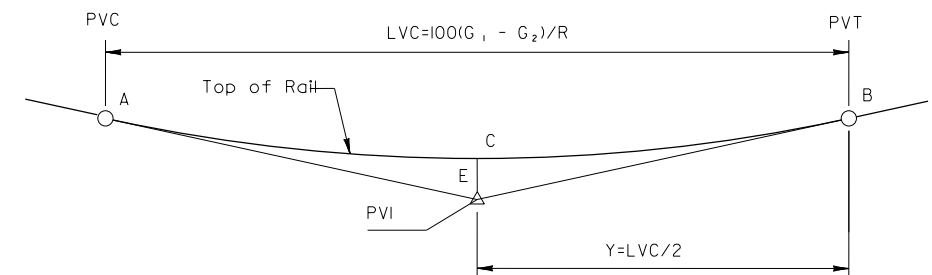
Using Chord Definition
Curve w/ Spirals



Direction of Increasing Stationing
CREST TYPE VERTICAL CURVE



Direction of Increasing Stationing
SAG TYPE VERTICAL CURVE



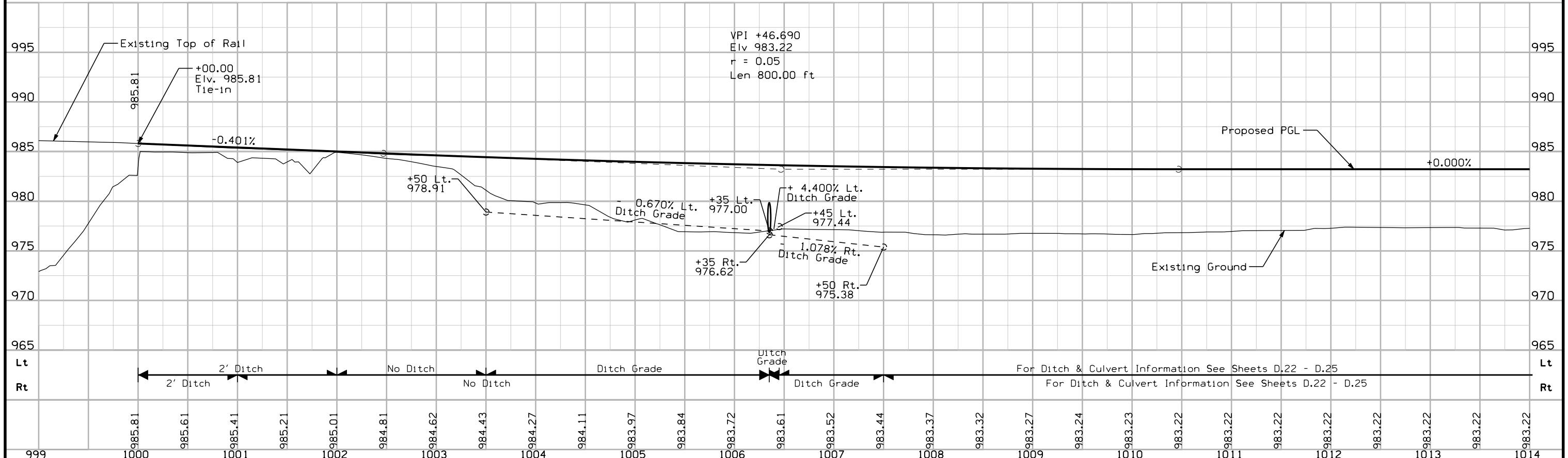
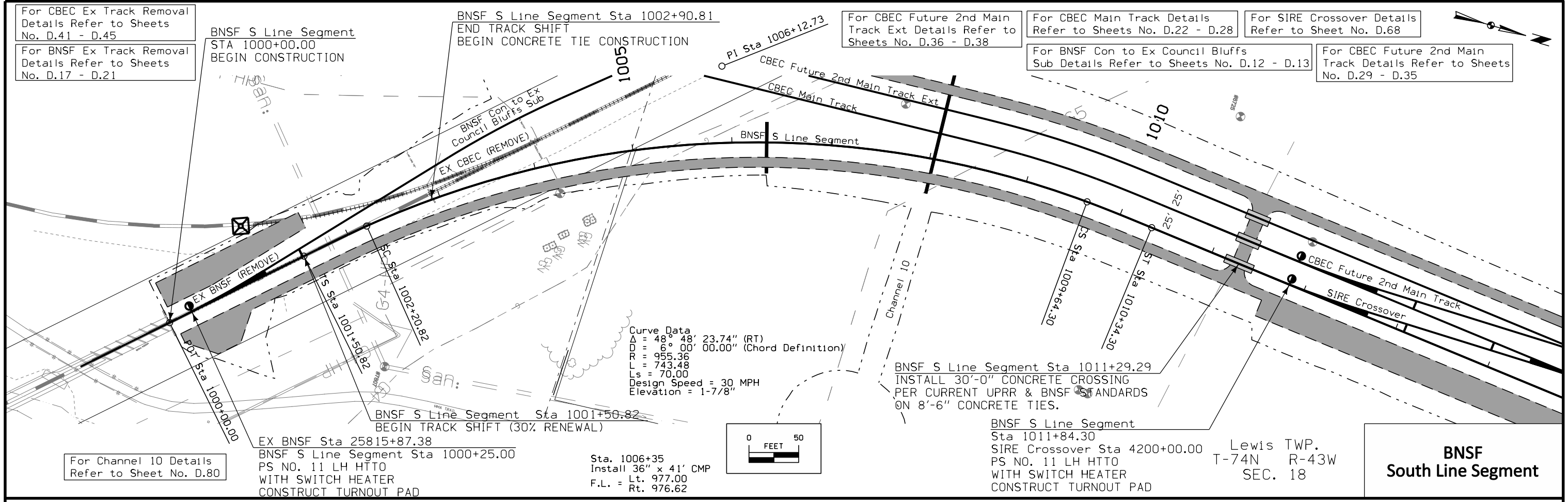
$R =$ Rate of Change in Grade per 100 ft Station = V/L
 $G_1, G_2 =$ Gradient Expressed as Feet Per 100 ft Station
 $LVC =$ Length of Vertical Curve in Feet.
 $E =$ Vertical Distance Between PVI and Vertical Curve.
 ML Sag Max. R

VERTICAL CURVE GEOMETRY

SURVEY AND STATIONING

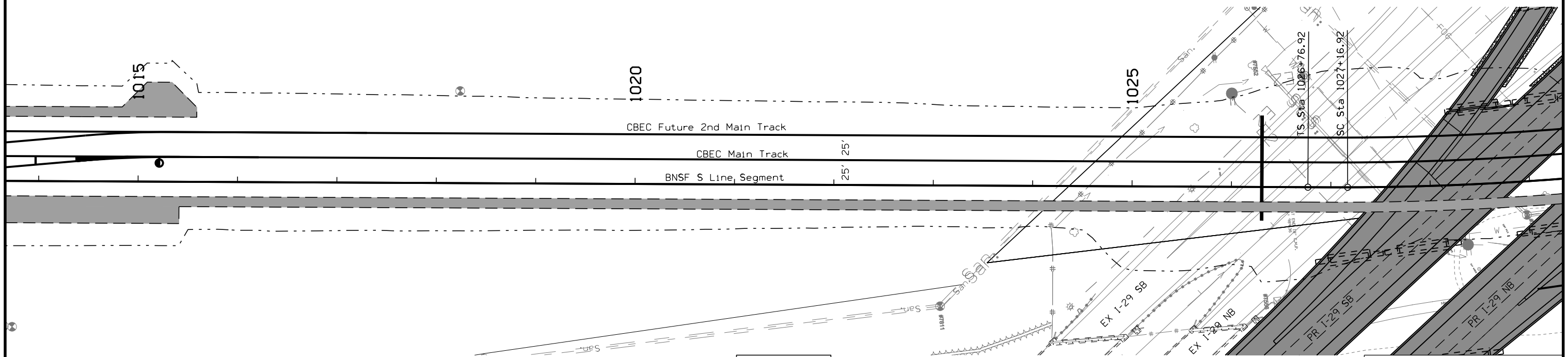
- RAILROAD STATIONING FOR THIS PROJECT IS BASED ON THE CENTERLINE OF PROPOSED ALIGNMENTS UTILIZING THE CHORD DEFINITION FOR ALL HORIZONTAL CURVATURE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL SURVEY CONTROL MONUMENTS. IN THE EVENT MONUMENTS ARE DAMAGED OR DESTROYED BY THE CONTRACTOR, THE ENGINEER WILL REPLACE THE MONUMENT SOLELY AT THE CONTRACTOR'S EXPENSE.

Intentionally Left Blank



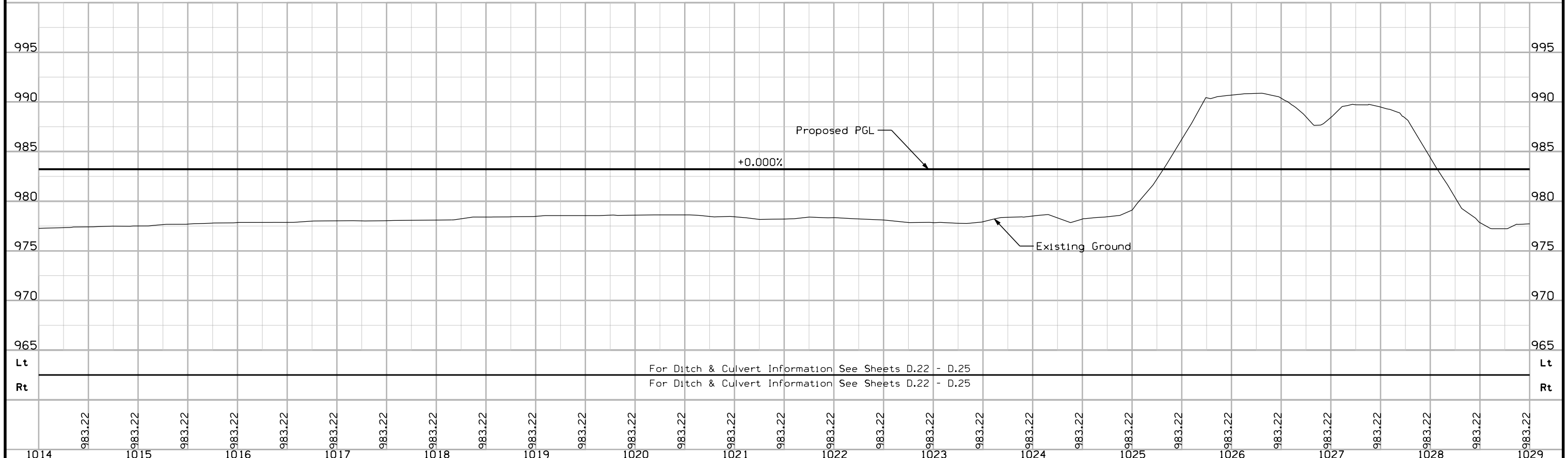
For CBEC Future 2nd Main Track
Details Refer to Sheets No. D.29 - D.35

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28



Lewis TWP.
T-74N R-43W
SEC. 18

**BNSF
South Line Segment**

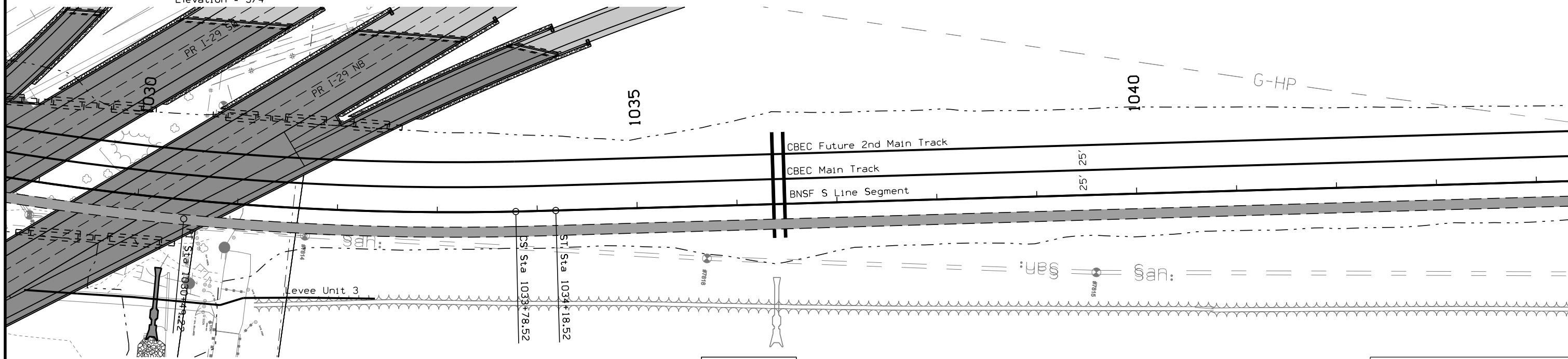
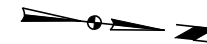


For Ditch & Culvert Information See Sheets D.22 - D.25
For Ditch & Culvert Information See Sheets D.22 - D.25

Curve Data
 $\Delta = 14^{\circ} 01' 54.91''$ (LT)
 $D = 2^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 2,864.93$
 $L = 661.60$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

For CBEC Future 2nd Main Track
 Details Refer to Sheets No. D.29 - D.35

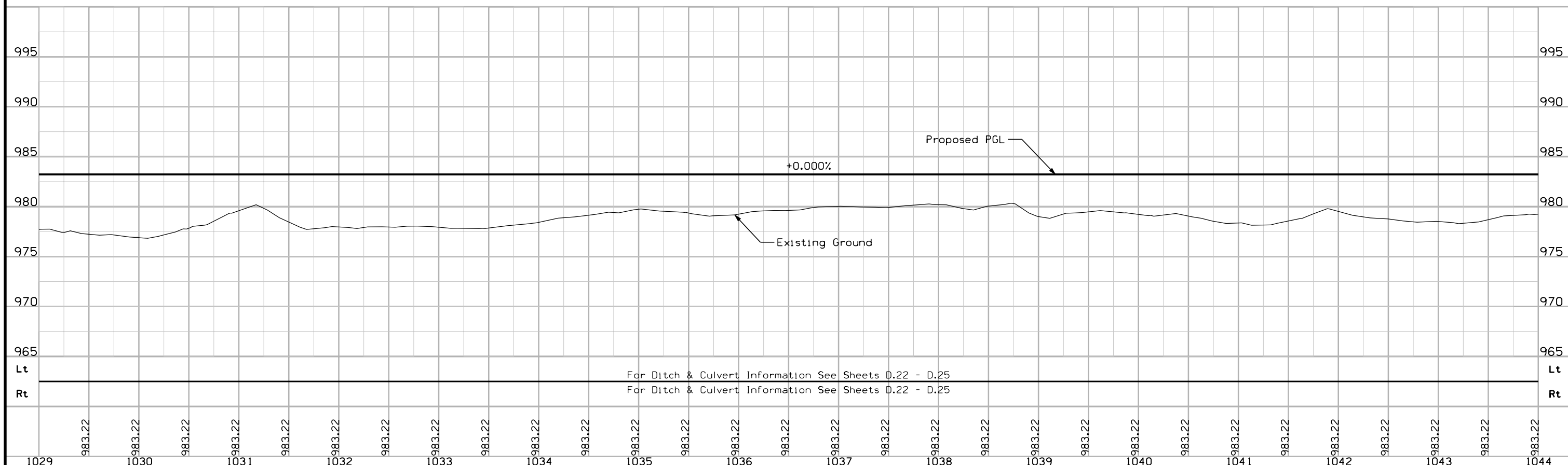
For CBEC Main Track Details
 Refer to Sheets No. D.22 - D.28



Lewis TWP.
 T-74N R-43W
 SEC. 18

Lewis TWP.
 T-74N R-43W
 SEC. 7

**BNSF
 South Line Segment**



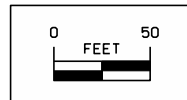
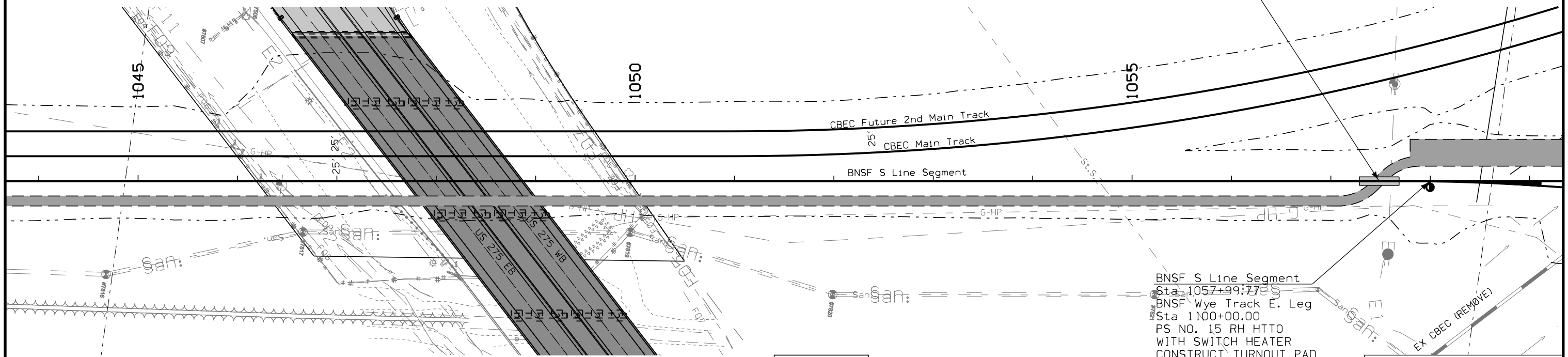
1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044
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For CBEC Future 2nd Main Track
Details Refer to Sheets No. D.29 - D.35

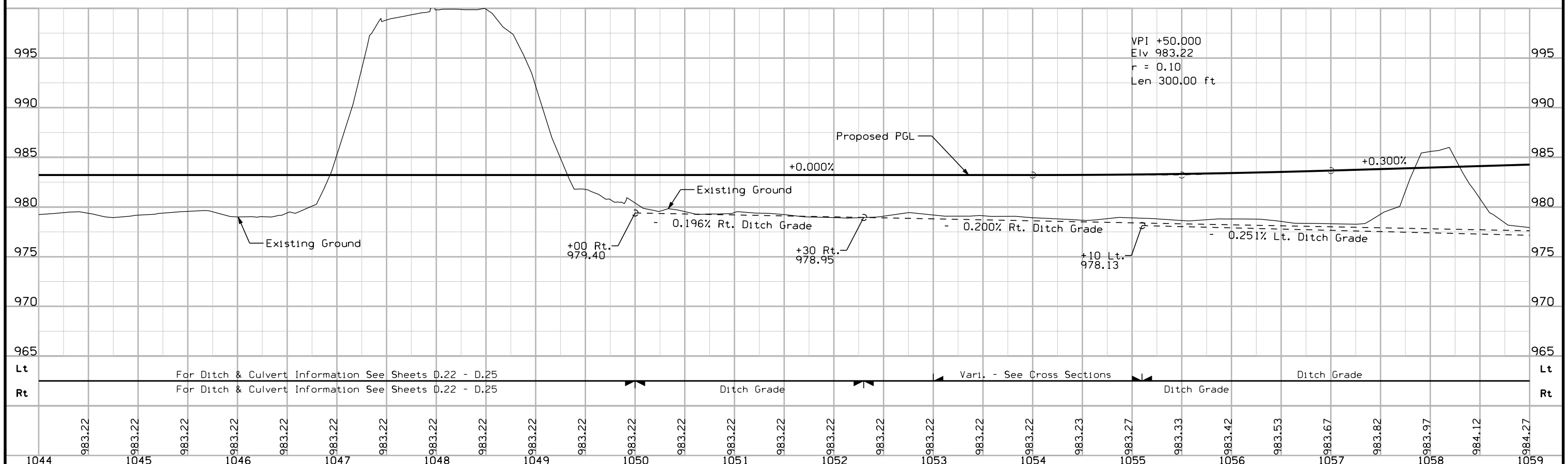
For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28

For CBEC Ex Track Removal
Details Refer to Sheets
No. D.41 - D.45

BNSF S Line Segment Sta 1057+48.65
INSTALL 40'-0" CONCRETE CROSSING
PER CURRENT UPRR & BNSF STANDARDS
ON 8'-6" CONCRETE TIES.



BNSF
South Line Segment



1044	983.22	1045	983.22	1046	983.22	1047	983.22	1048	983.22	1049	983.22	1050	983.22	1051	983.22	1052	983.22	1053	983.22	1054	983.22	1055	983.27	1056	983.33	1057	983.42	1058	983.53	1059	983.67	983.82	983.97	984.12	984.27
------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	--------	--------	--------	--------

For CBEC Future 2nd Main Track
Details Refer to Sheets No. D.29 - D.35

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28

For CBEC Ex Track Removal Details
Refer to Sheets No. D.41 - D.45

For BNSF Wye Track N Leg Details
Refer to Sheets No. D.10 - D.11

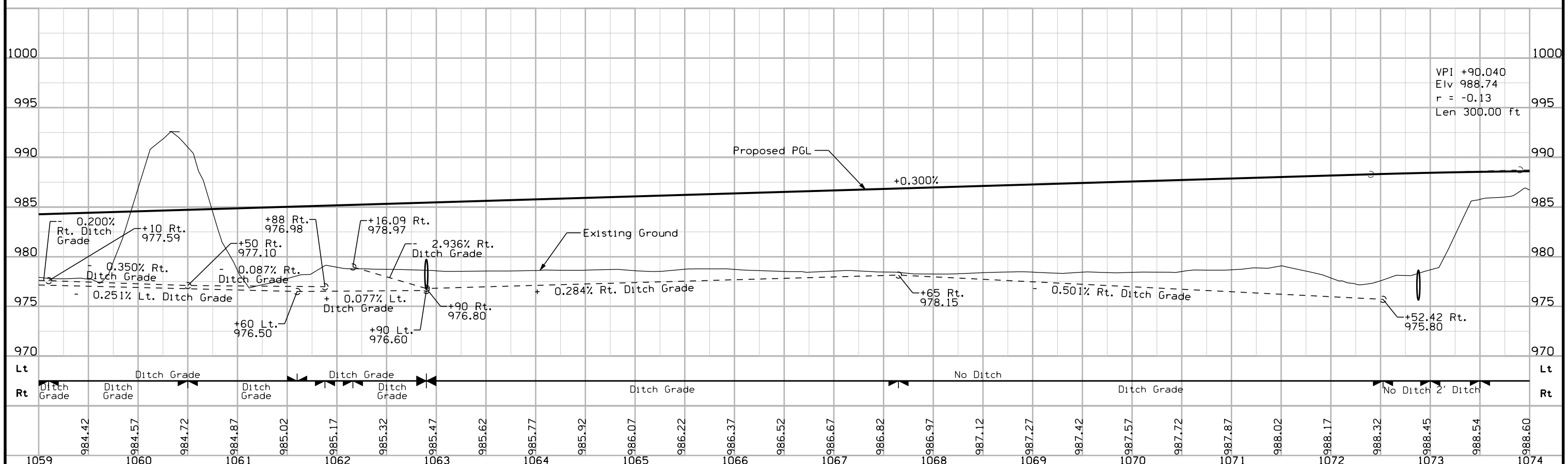
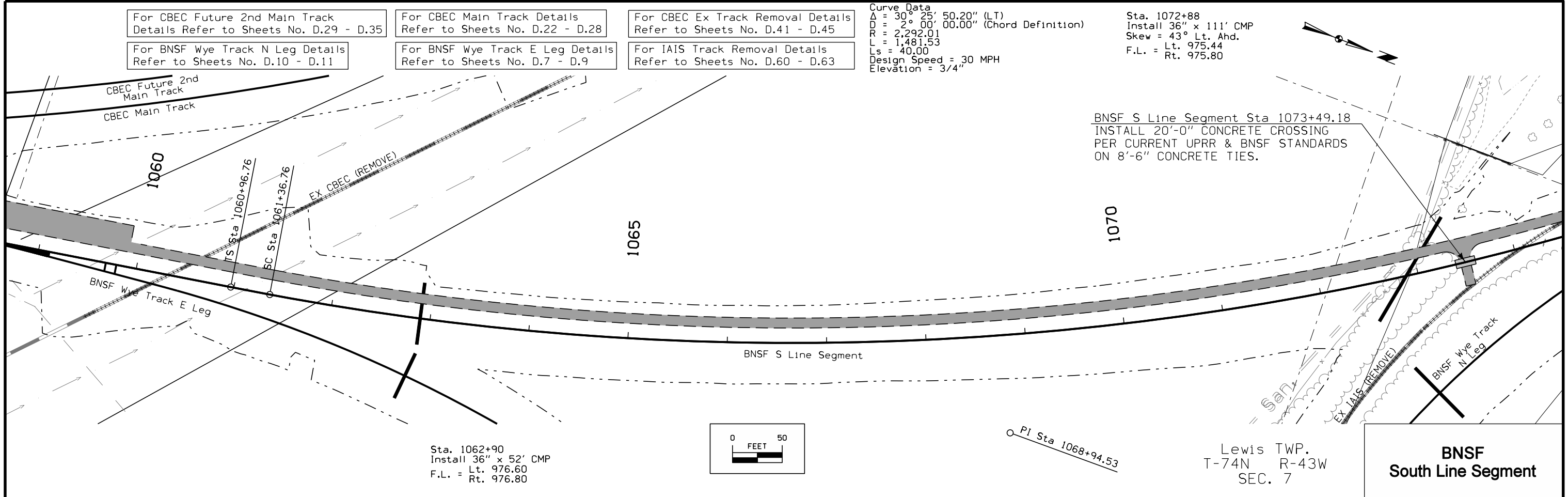
For BNSF Wye Track E Leg Details
Refer to Sheets No. D.7 - D.9

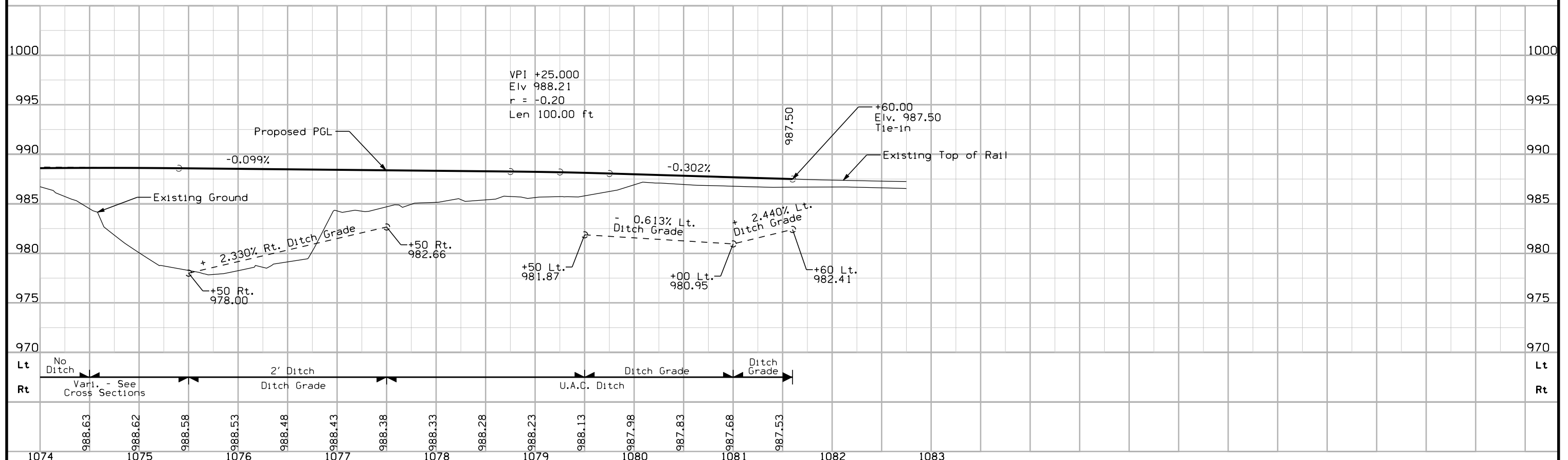
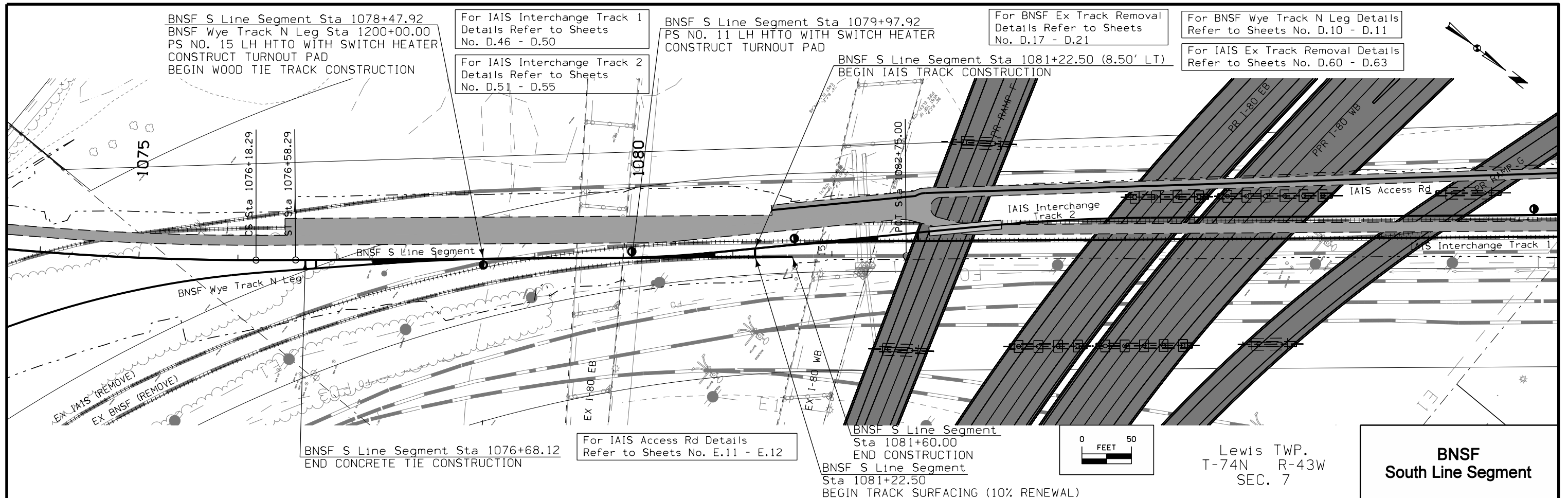
For IAIS Track Removal Details
Refer to Sheets No. D.60 - D.63

Curve Data
 $\Delta = 30^\circ 25' 50.20''$ (LT)
 $D = 2^\circ 00' 00.00''$ (Chord Definition)
 $R = 2,292.01$
 $L = 1,481.53$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

Sta. 1072+88
 Install 36" x 111' CMP
 Skew = 43° Lt. Ahd.
 F.L. = Lt. 975.44
 Rt. 975.80

BNSF S Line Segment Sta 1073+49.18
 INSTALL 20'-0" CONCRETE CROSSING
 PER CURRENT UPRR & BNSF STANDARDS
 ON 8'-6" CONCRETE TIES.





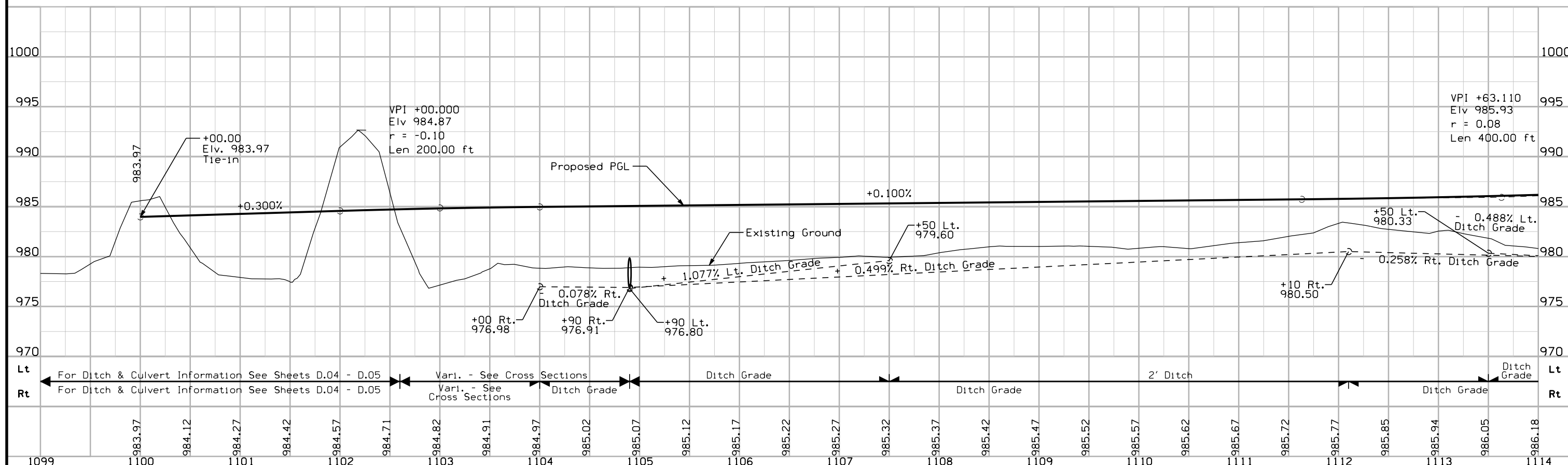
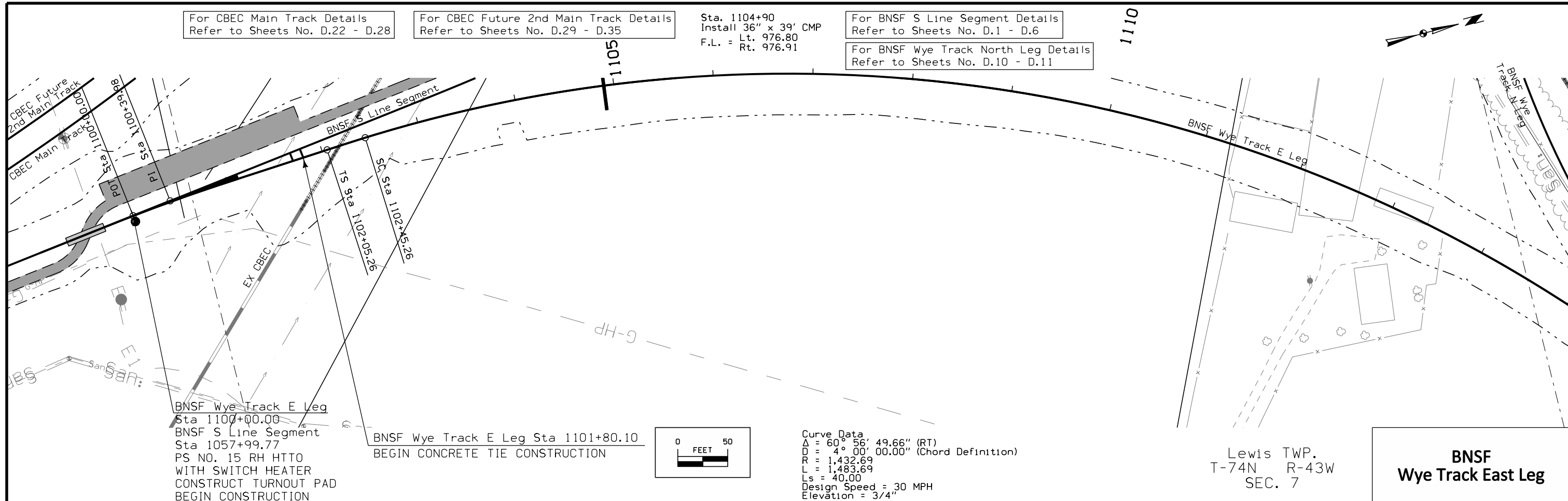
For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28

For CBEC Future 2nd Main Track Details
Refer to Sheets No. D.29 - D.35

Sta. 1104+90
Install 36" x 39' CMP
Lt. 976.80
F.L. = Rt. 976.91

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For BNSF Wye Track North Leg Details
Refer to Sheets No. D.10 - D.11



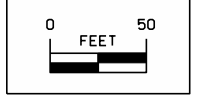
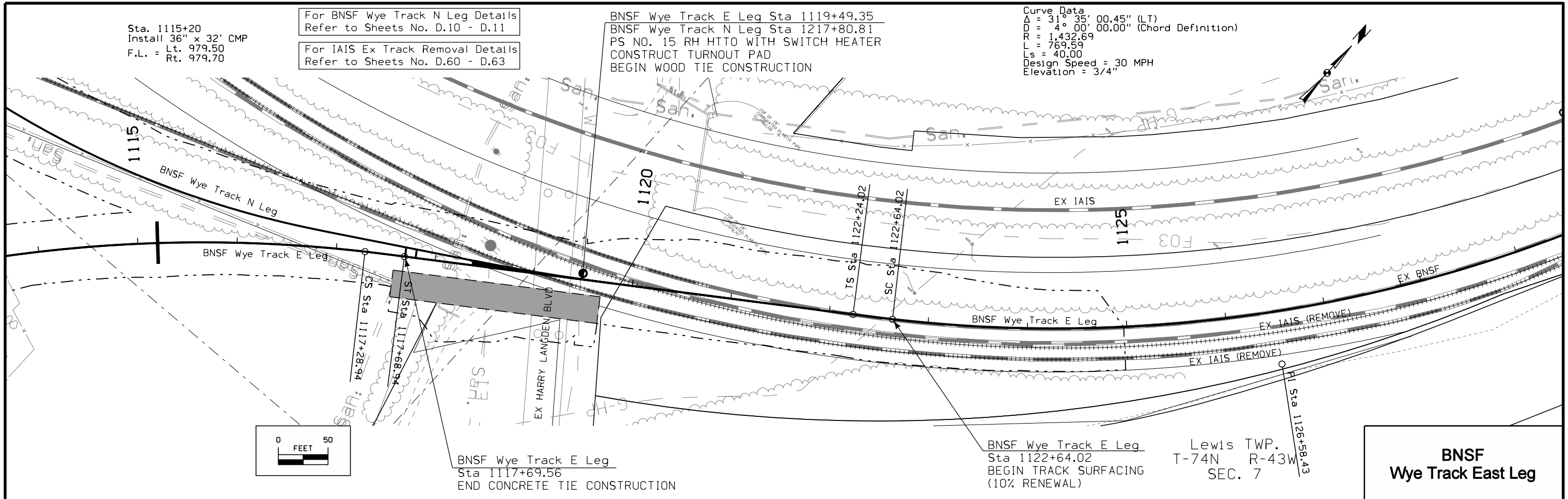
Sta. 1115+20
 Install 36" x 32' CMP
 F.L. = Lt. 979.50
 Rt. 979.70

For BNSF Wye Track N Leg Details
 Refer to Sheets No. D.10 - D.11

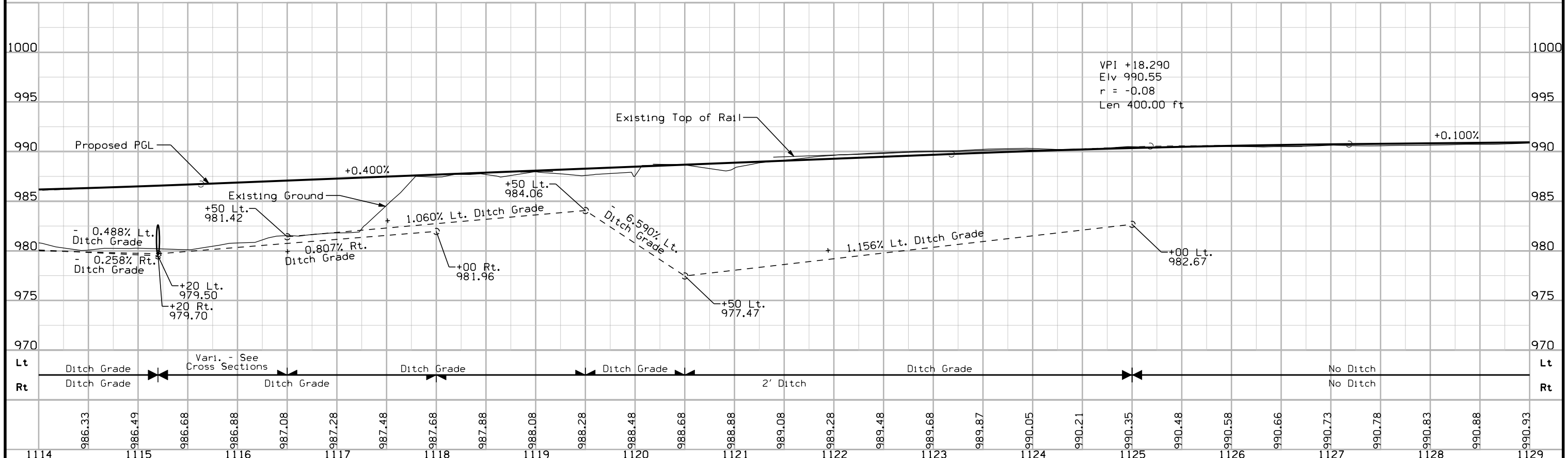
For IAIS Ex Track Removal Details
 Refer to Sheets No. D.60 - D.63

BNSF Wye Track E Leg Sta 1119+49.35
 BNSF Wye Track N Leg Sta 1217+80.81
 PS NO. 15 RH HTTO WITH SWITCH HEATER
 CONSTRUCT TURNOUT PAD
 BEGIN WOOD TIE CONSTRUCTION

Curve Data
 $\Delta = 31^\circ 35' 00.45''$ (LT)
 $BD = 4' 00' 00.00''$ (Chord Definition)
 $R = 1,432.69$
 $Ls = 769.59$
 $Lc = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

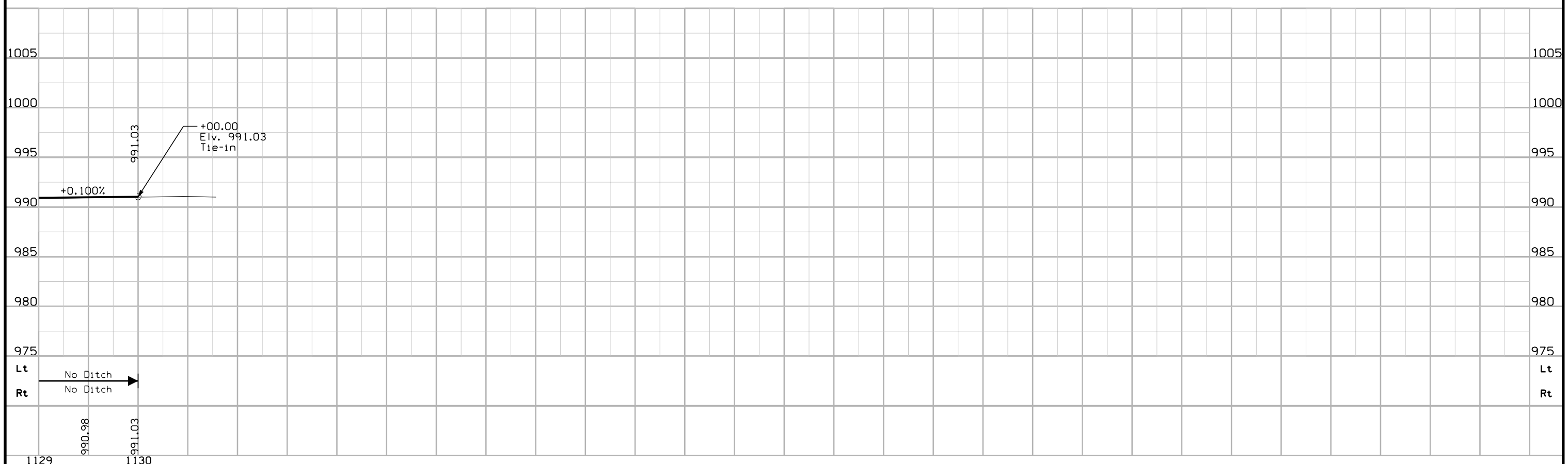
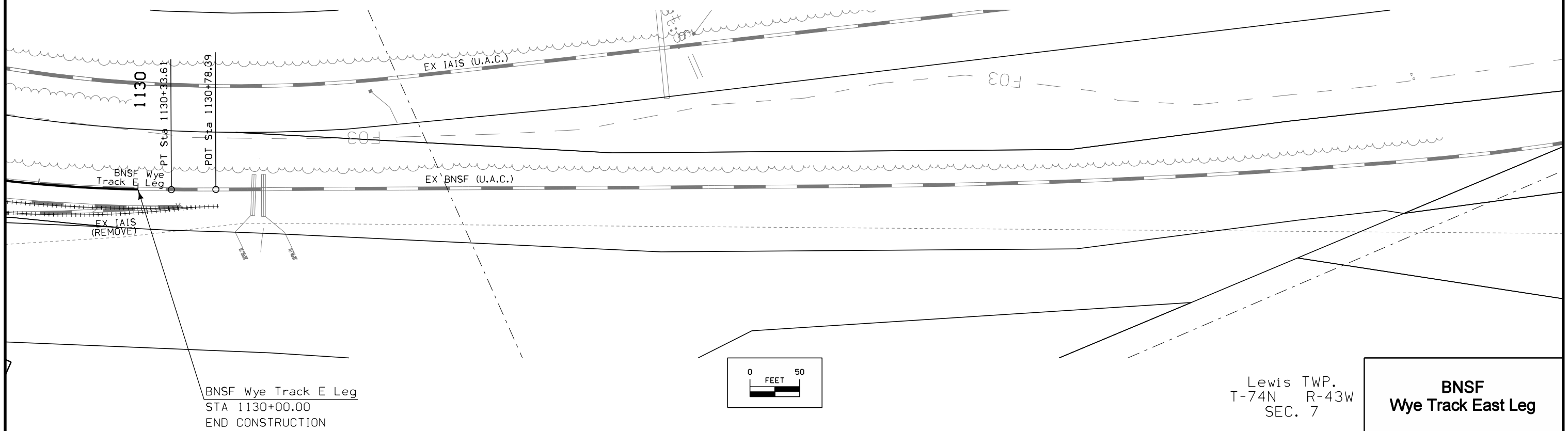
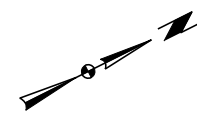


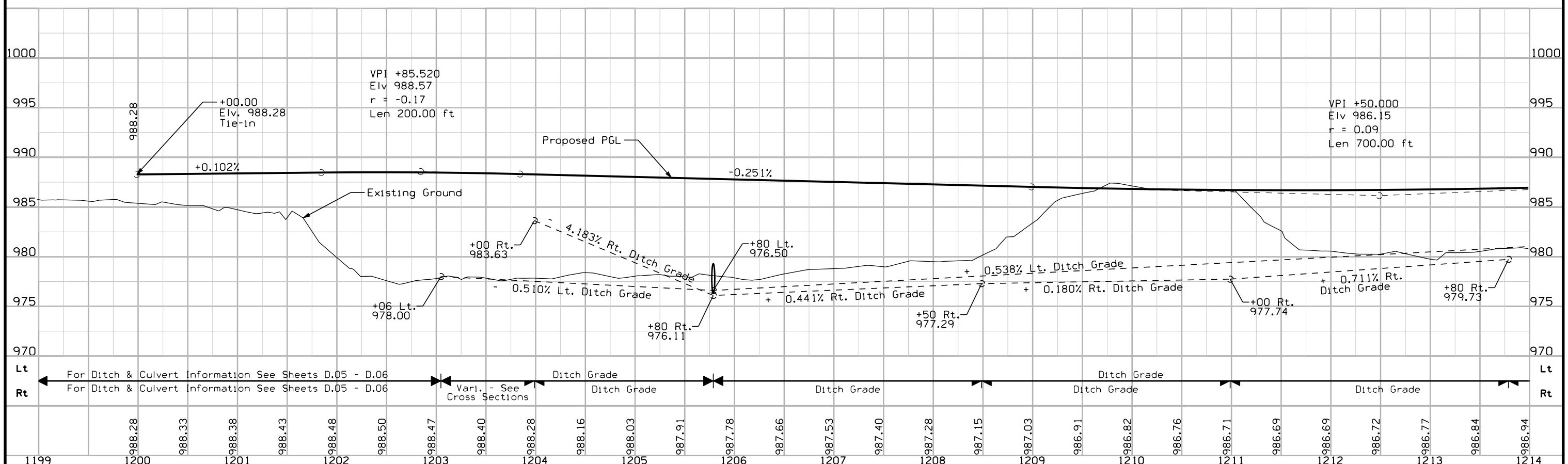
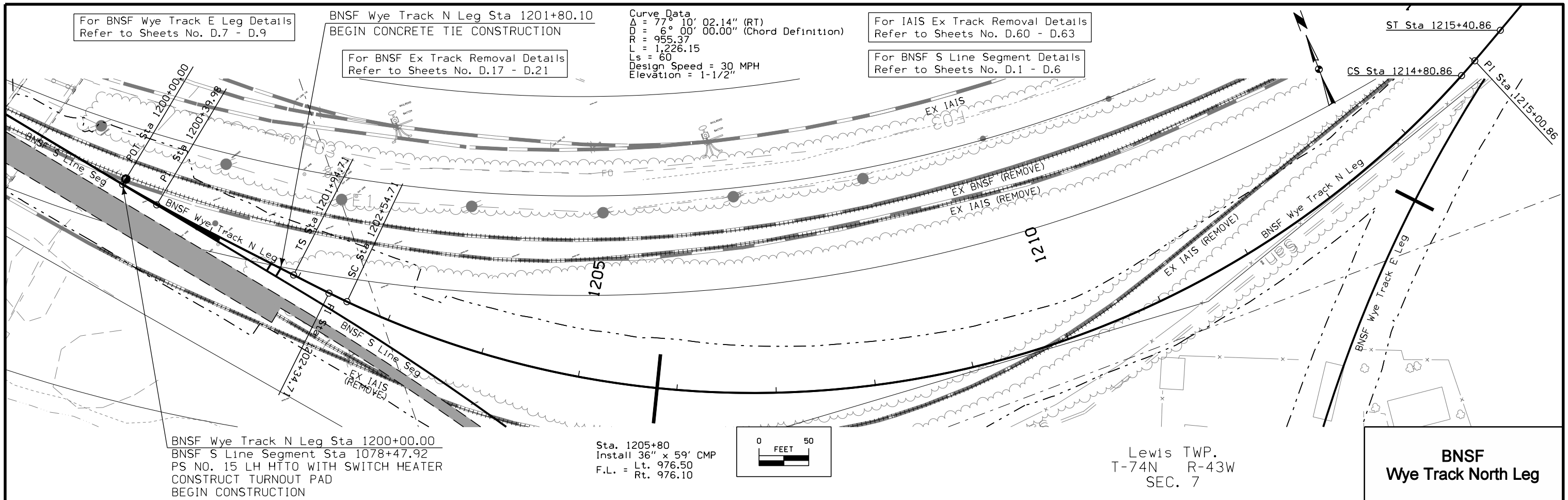
**BNSF
 Wye Track East Leg**

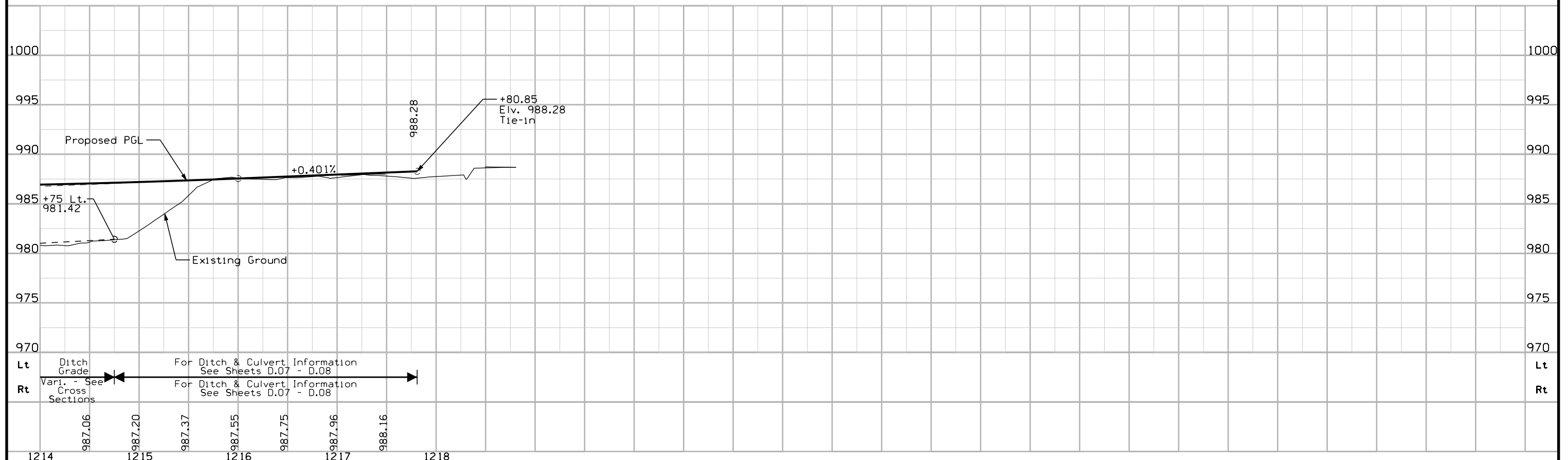
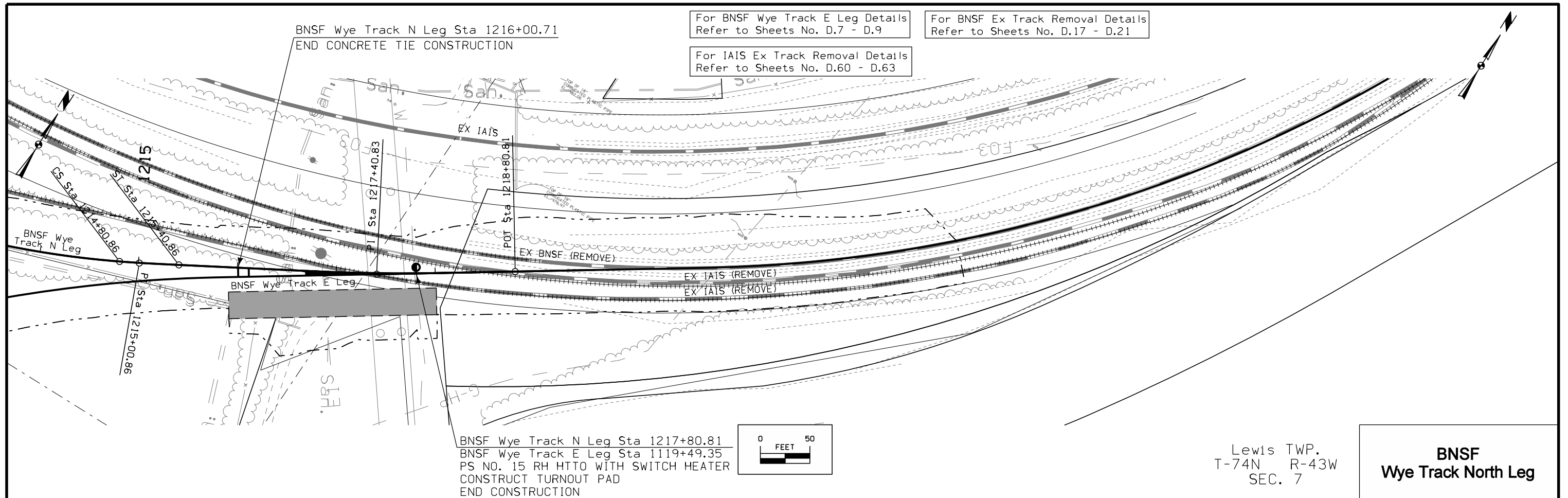


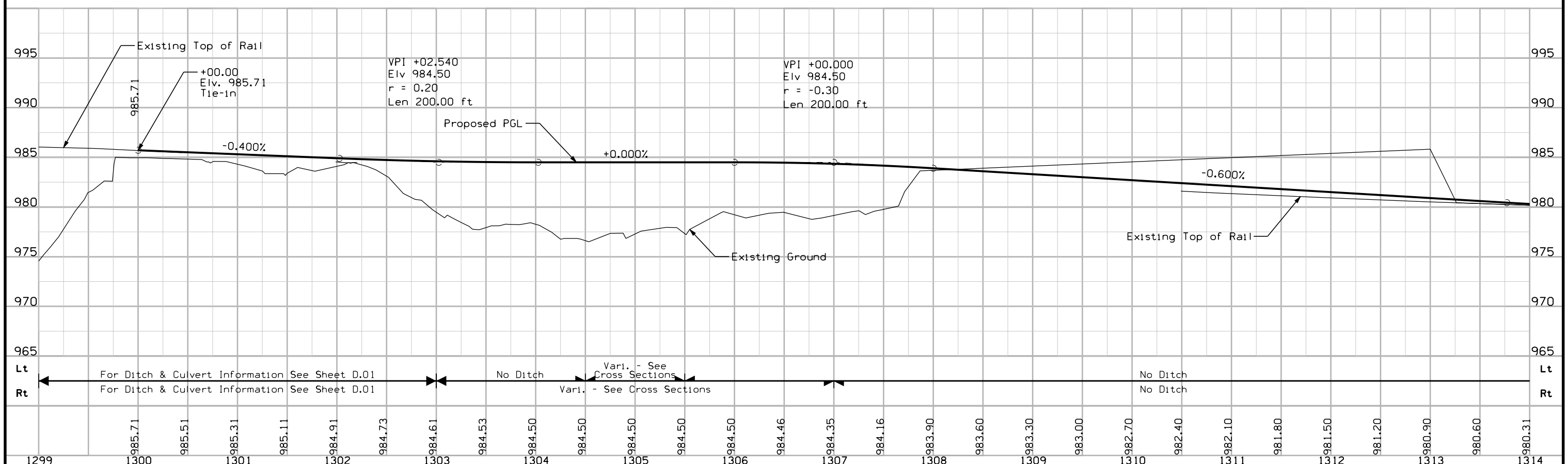
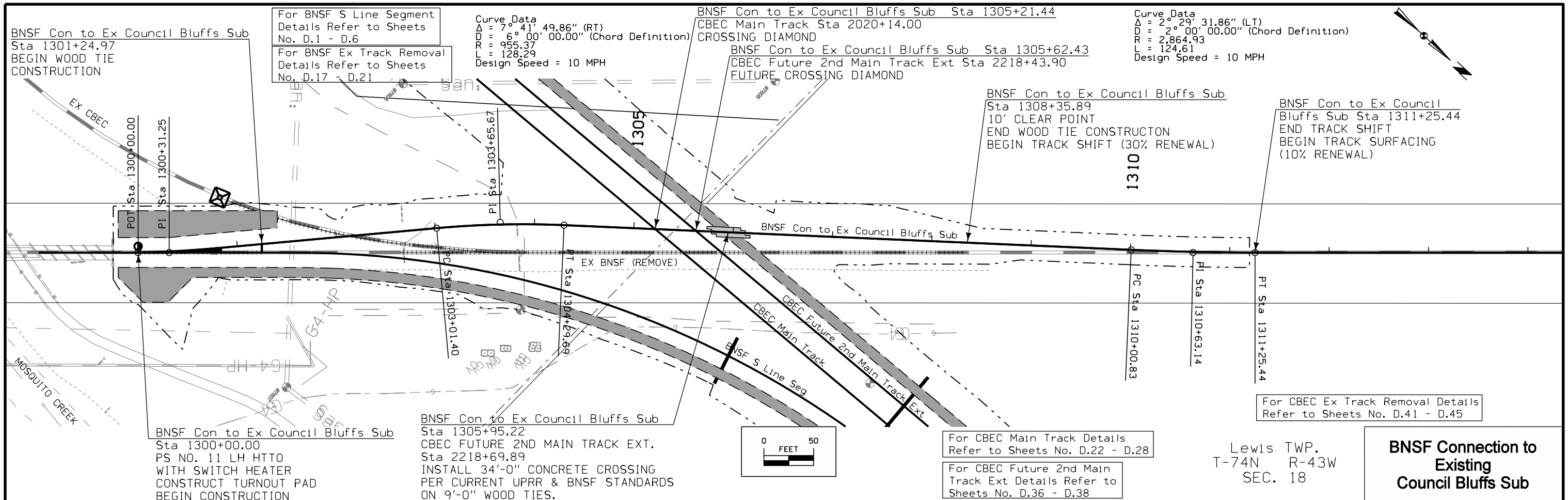
1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129
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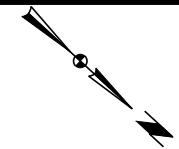
For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63











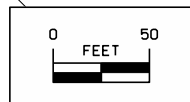
1315

BNSF Con to Ex
Council Bluffs Sub

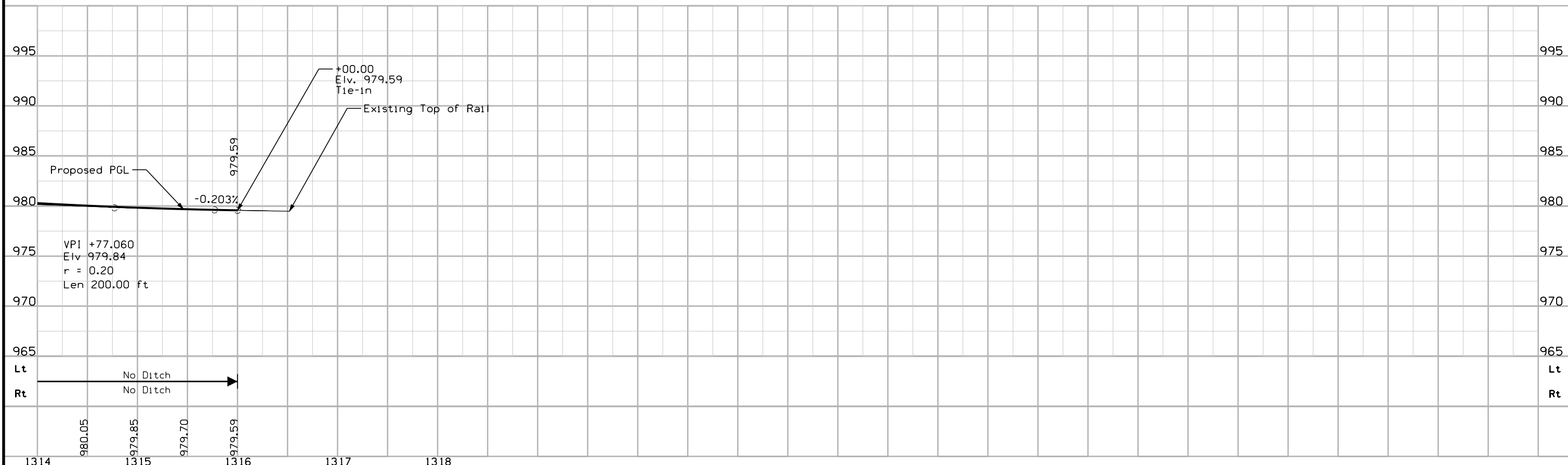
EX BNSF

POT Sta 1317+00.00

BNSF Con to Ex Council Bluffs Sub
Sta 1316+00.00
END TRACK SURFACING



BNSF Connection to
Existing
Council Bluffs Sub



1314	980.05	1315	979.85	1316	979.70	1317	979.59	1318
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For BNSF Ex Track Removal
Details Refer to Sheets
No. D.17 - D.21

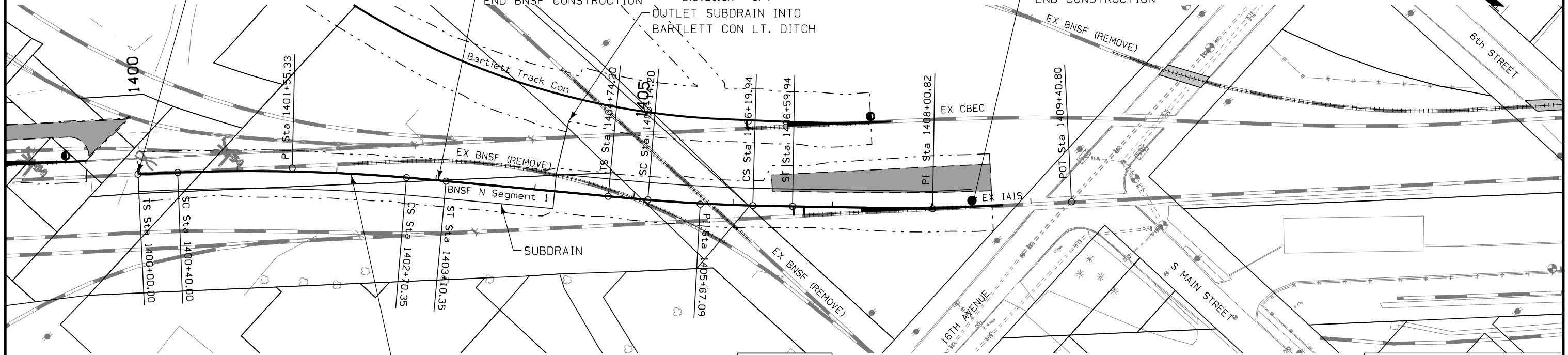
BNSF N Segment 1 Sta 1400+00.00
BEGIN TRACK SHIFT
(30% RENEWAL)
BEGIN CONSTRUCTION

BNSF N Segment 1
Sta 1403+02.32
BNSF EX. ROW LIMITS
END BNSF CONSTRUCTION

Curve Data
Δ = 4° 22' 19.00" (LT)
D = 3° 00' 00.00" (Chord Definition)
R = 1,910.08
L = 105.74
Ls = 40.00
Design Speed = 10 MPH
Elevation = 3/4"

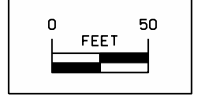
BNSF N Segment 1 Sta 1408+40.80
PS NO. 15 RH HTTO
WITH SWITCH HEATER
CONSTRUCT TURNOUT PAD
END CONSTRUCTION

For Bartlett Track Con
Details Refer to Sheets
No. D.71 - D.73



Curve Data
Δ = 8° 06' 37.87" (RT)
D = 3° 00' 00.00" (Chord Definition)
R = 1,910.08
L = 230.36
Ls = 40.00
Design Speed = 10 MPH
Elevation = 3/4"

BNSF N Segment 1 Sta 1402+14.48
10' CLEAR POINT
BEGIN WOOD TIE CONSTRUCTION

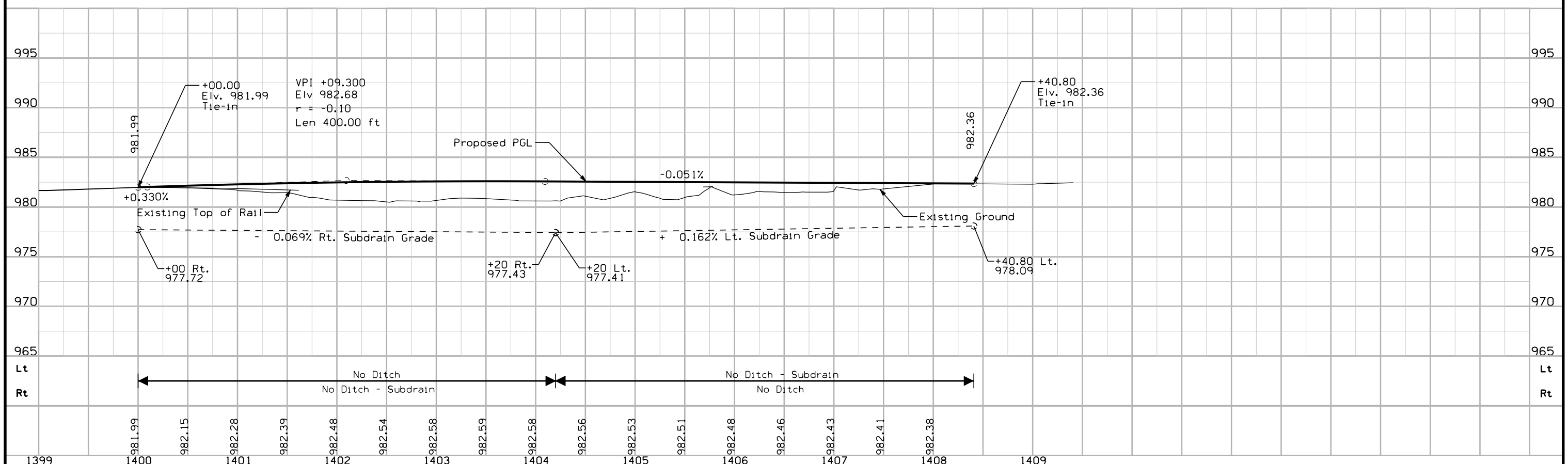


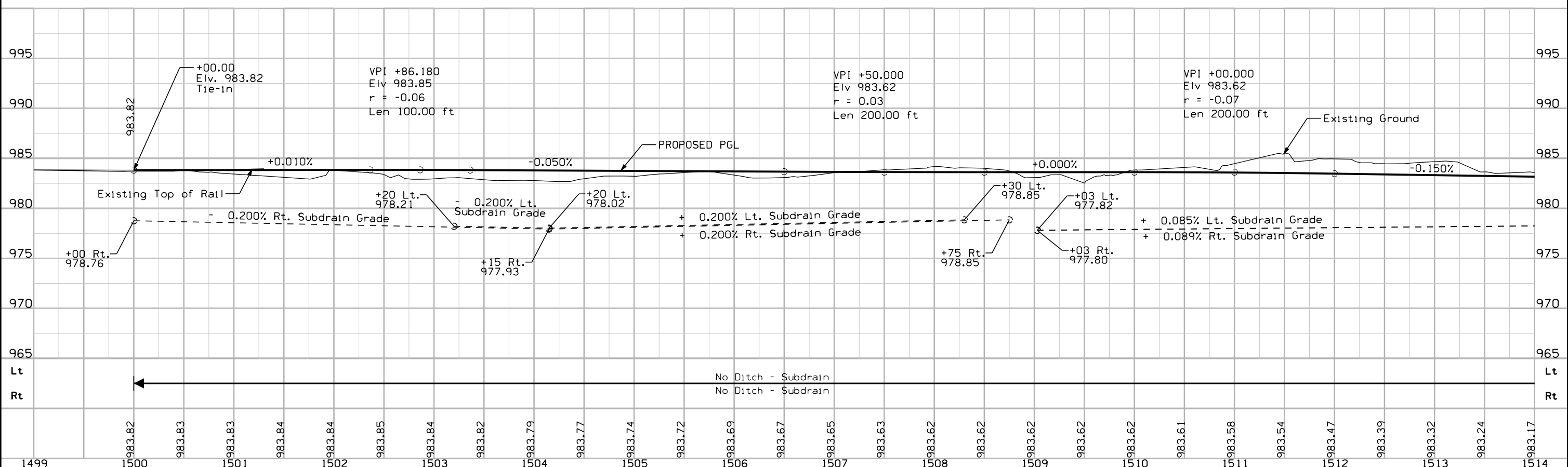
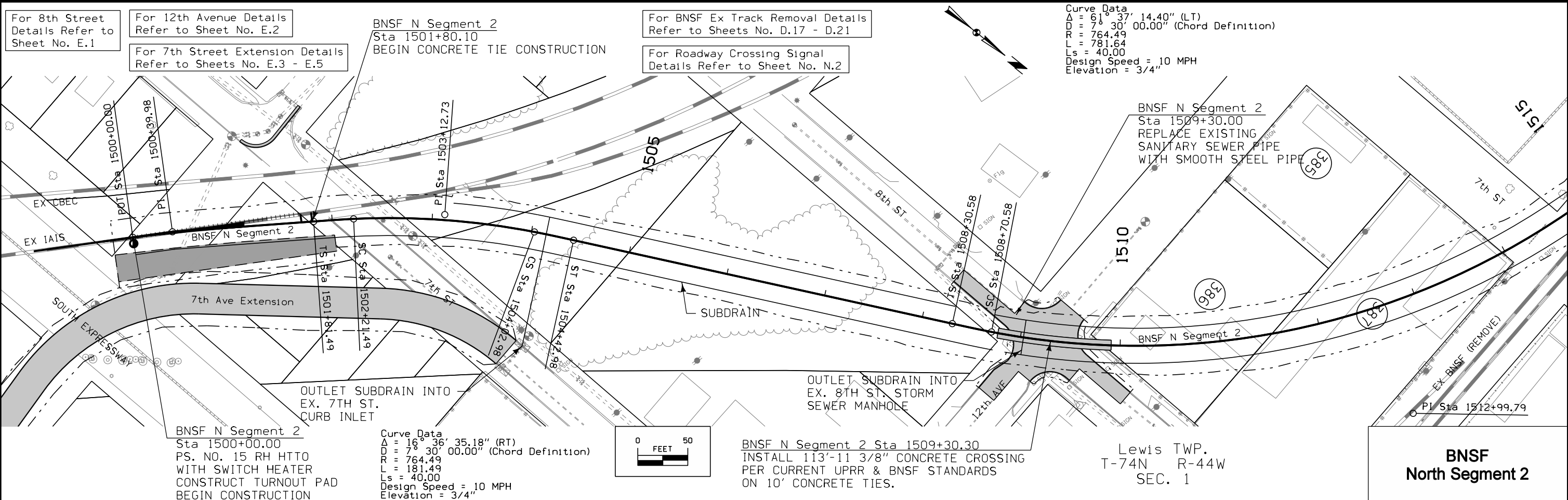
For 16th Avenue
Details Refer to Sheets
No. E.7

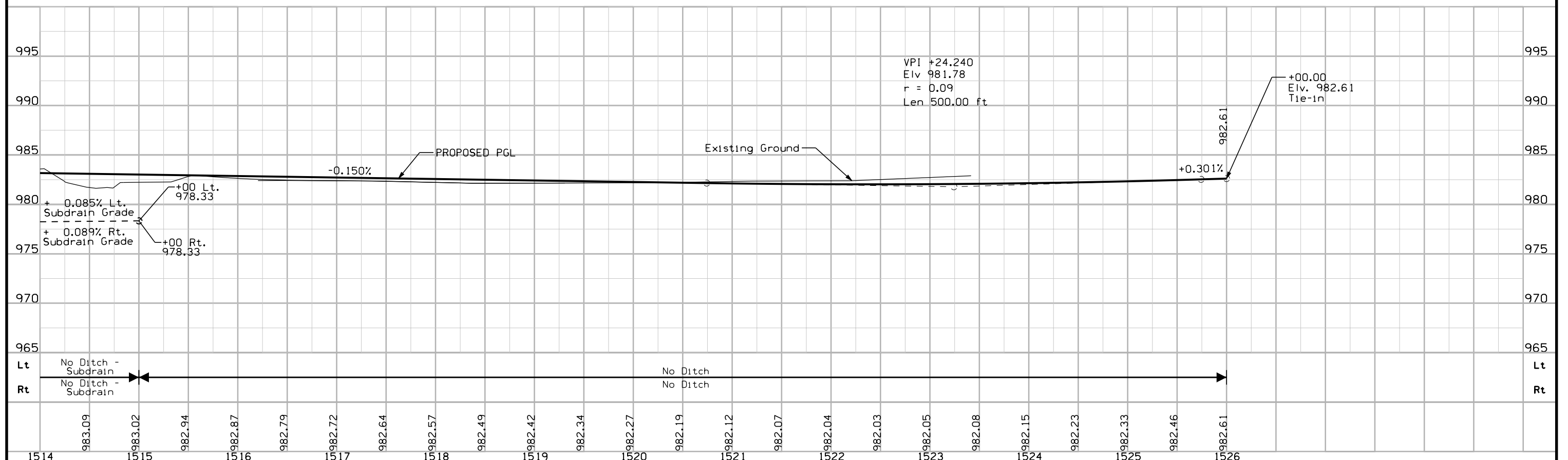
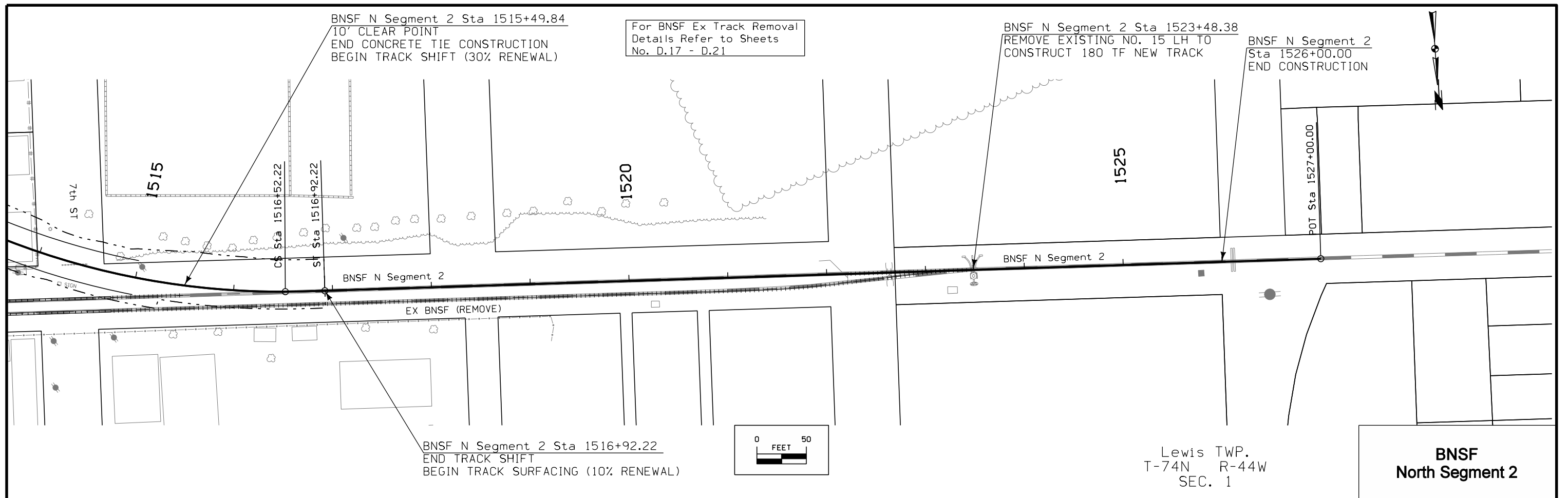
For 6th Street
Details Refer to Sheets
No. E.6

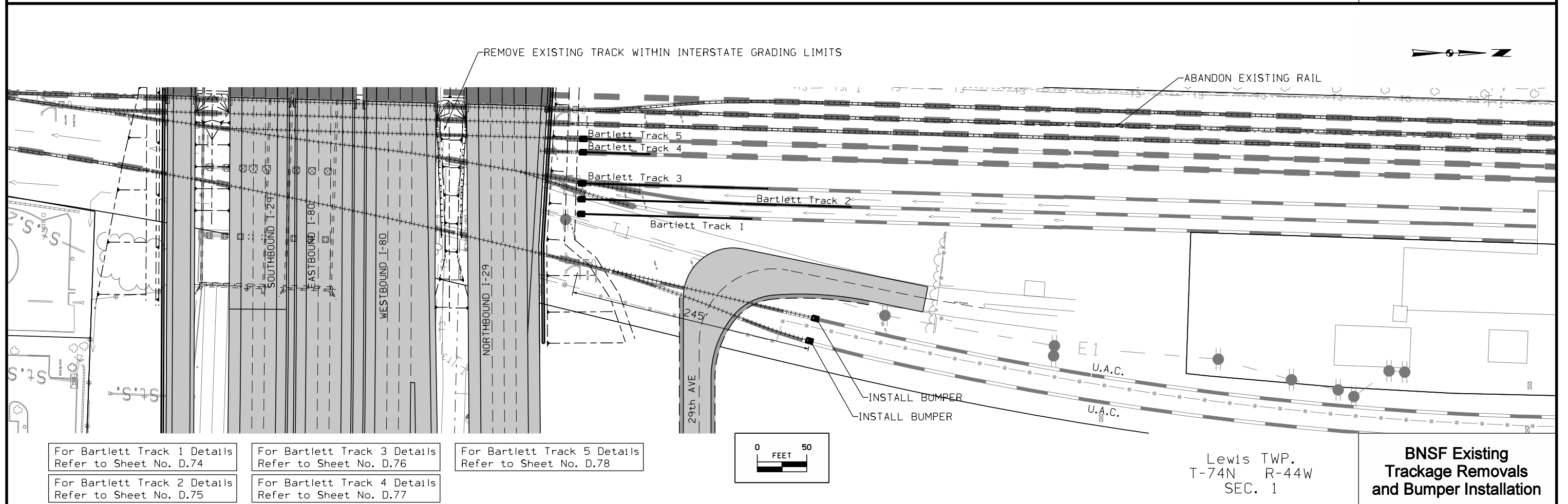
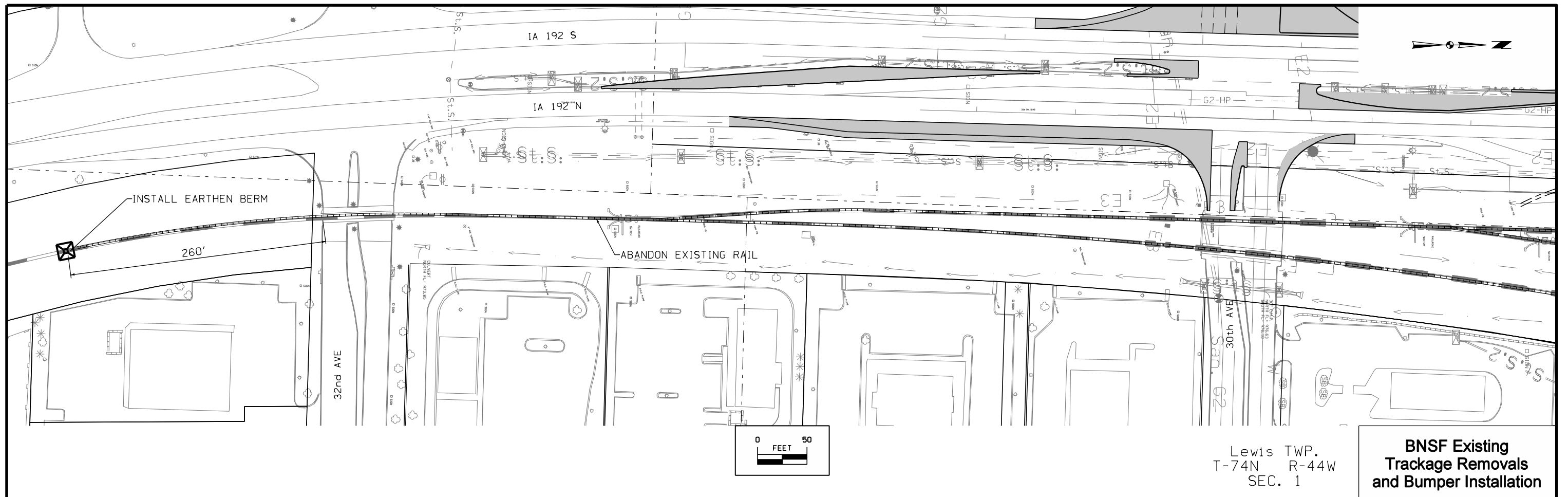
Lewis TWP.
T-74N R-44W
SEC. 1

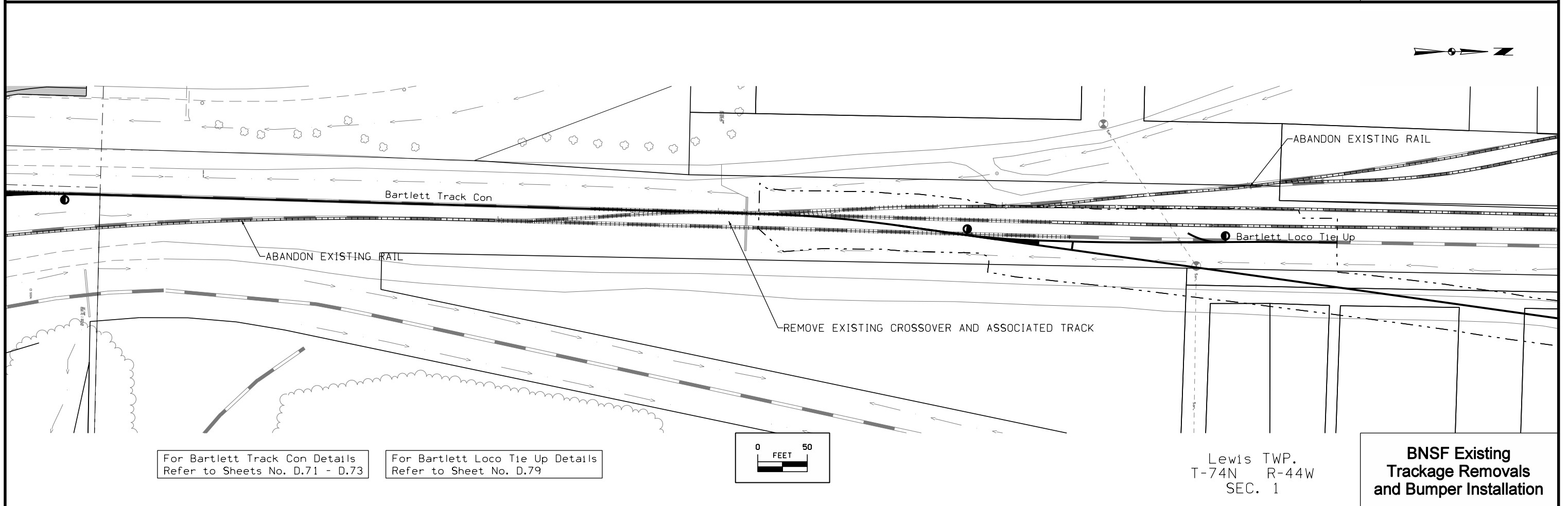
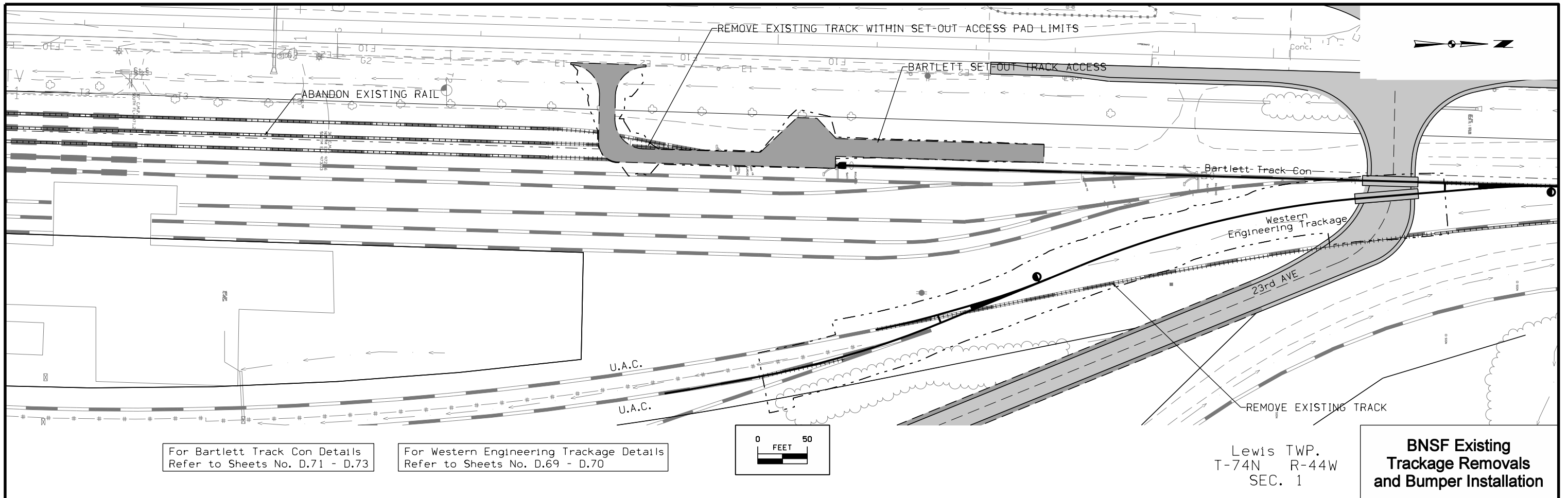
**BNSF
North Segment 1**

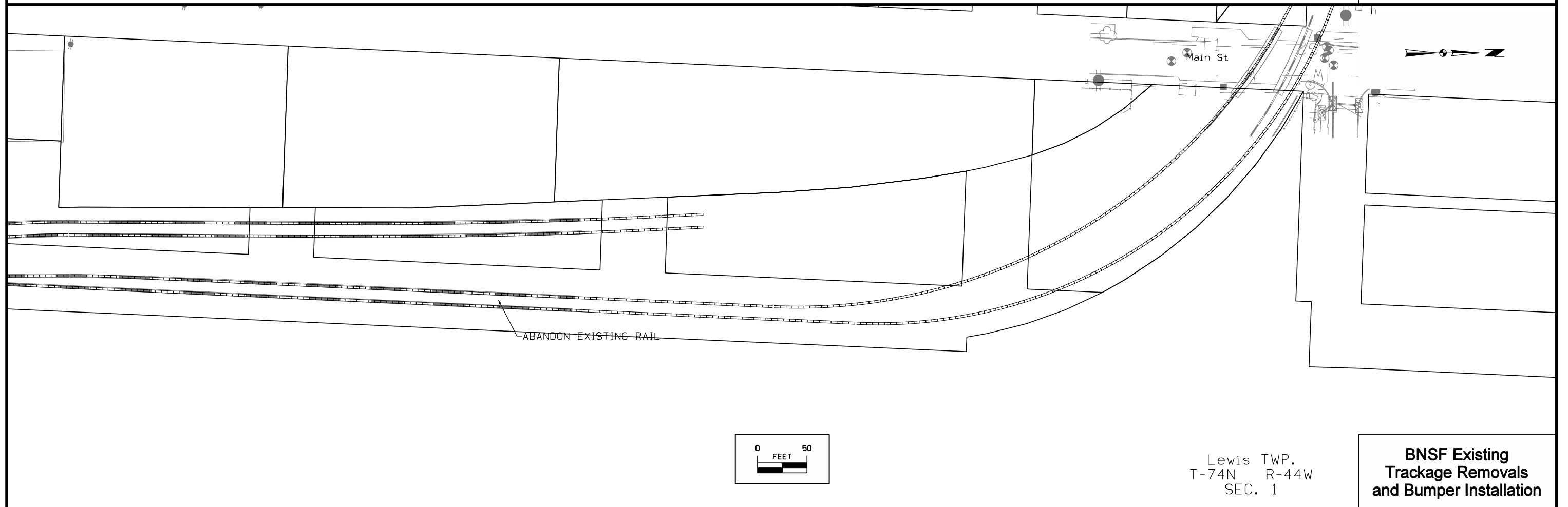
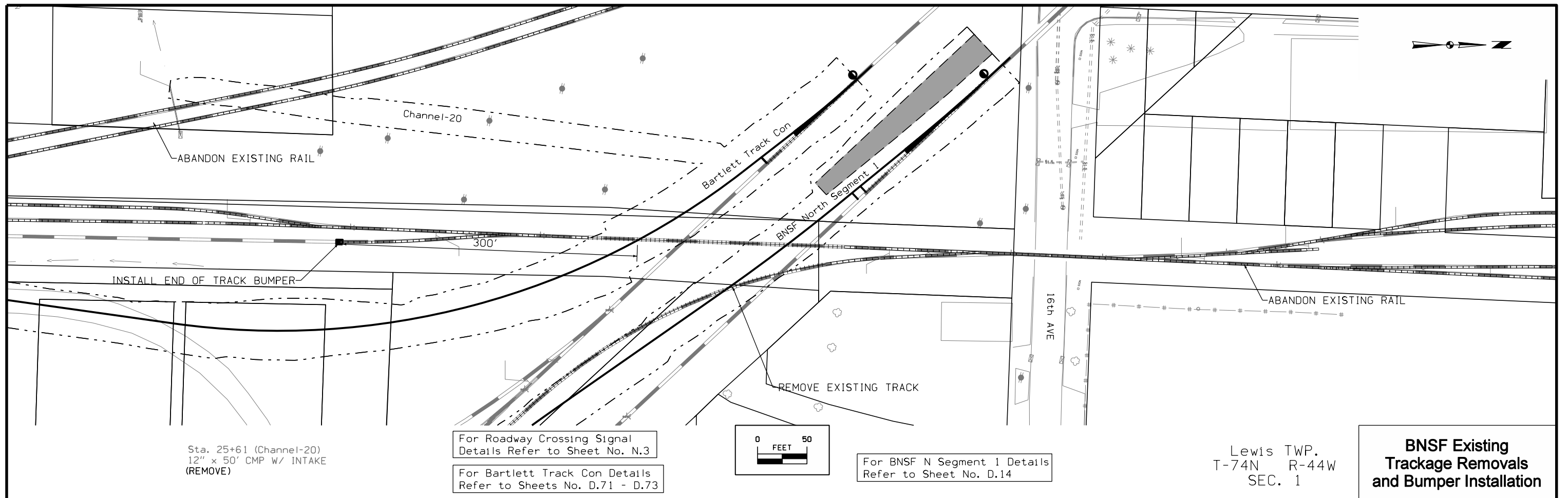


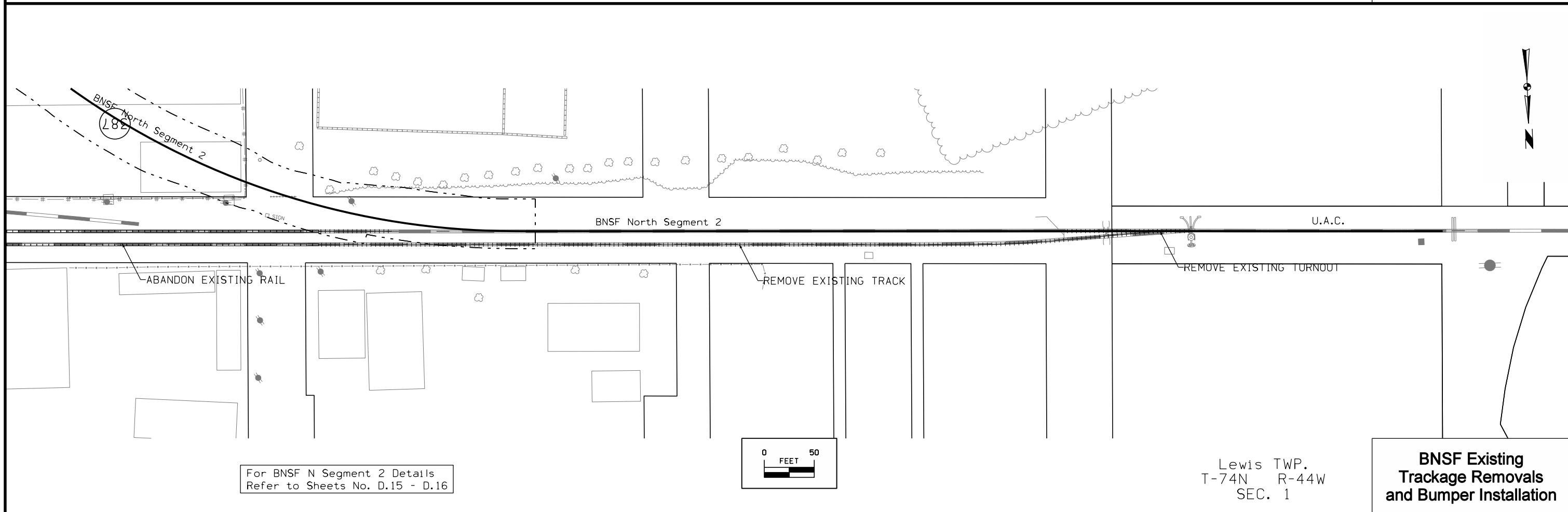
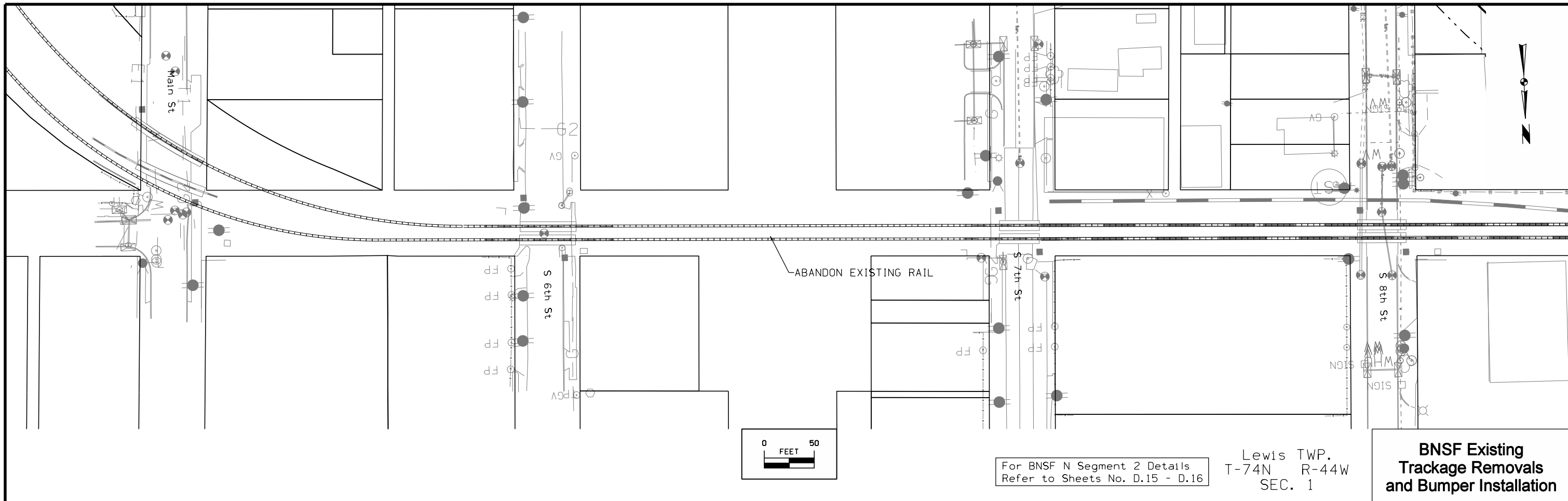


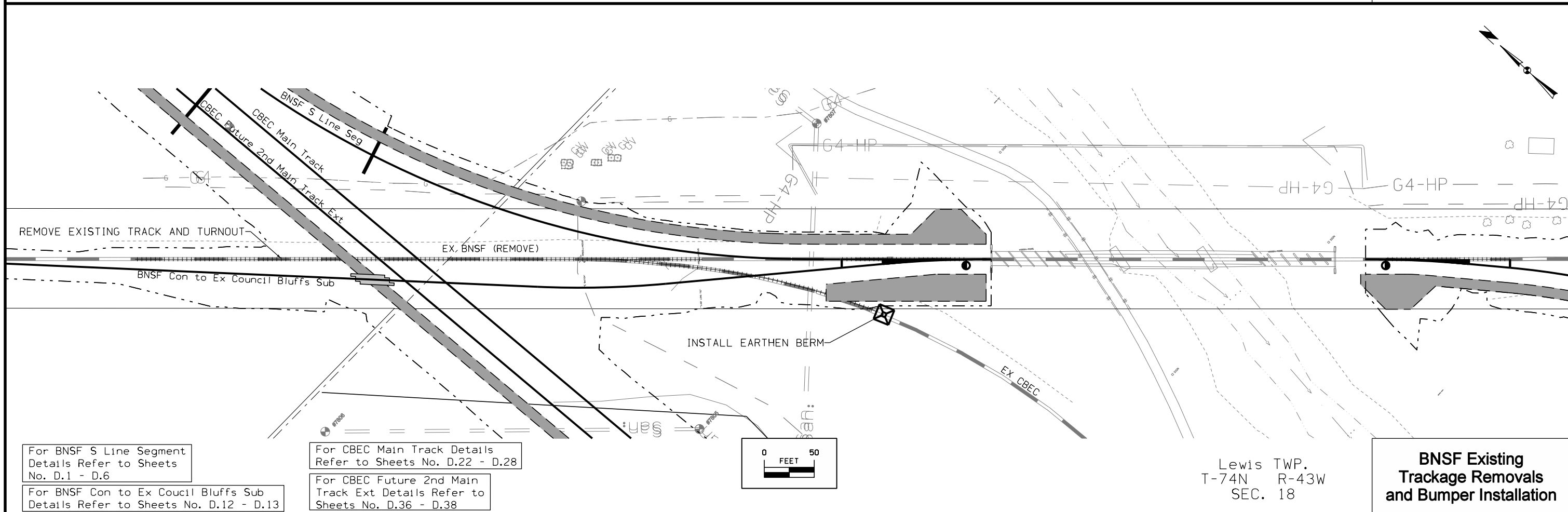
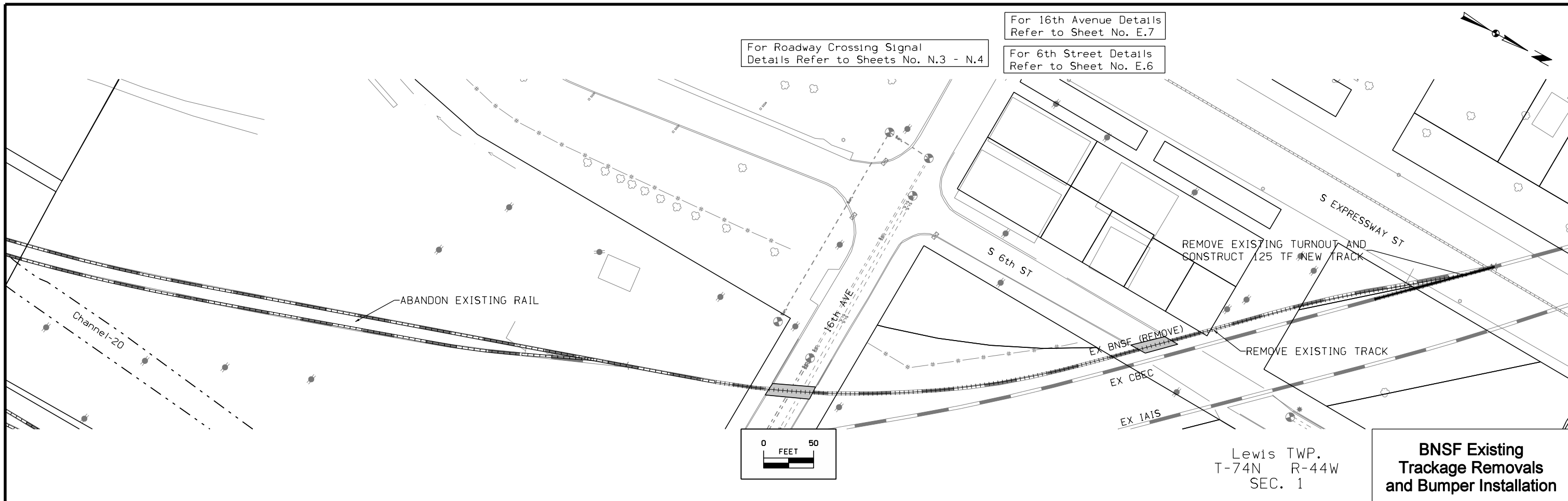


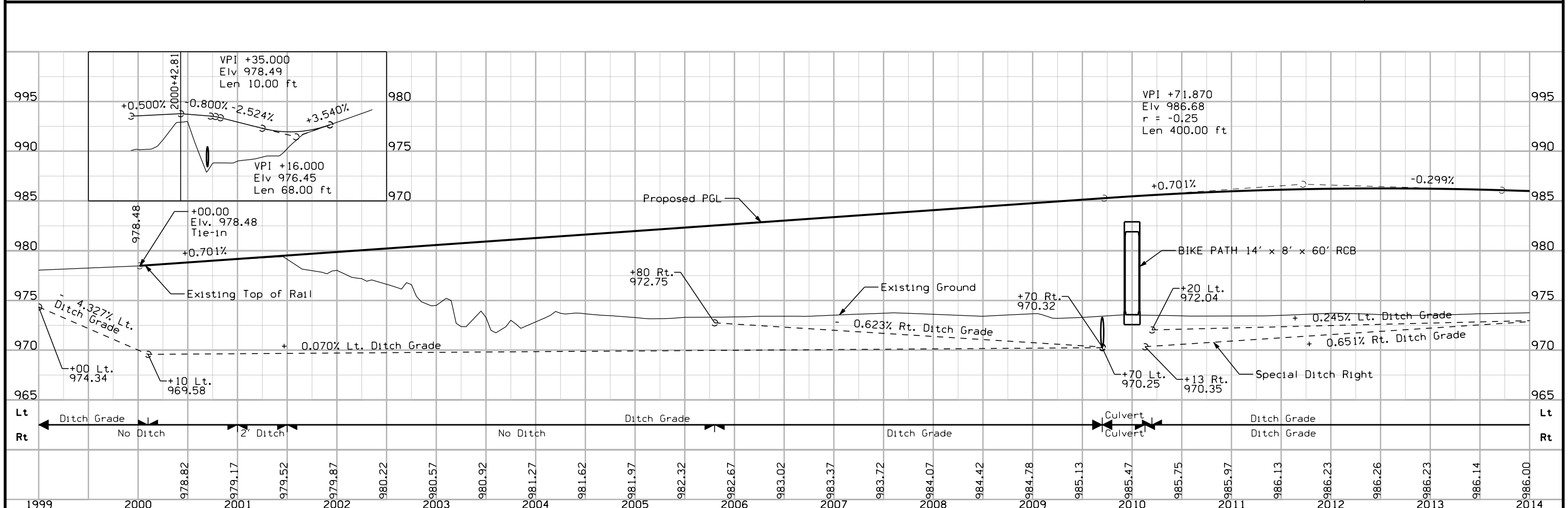
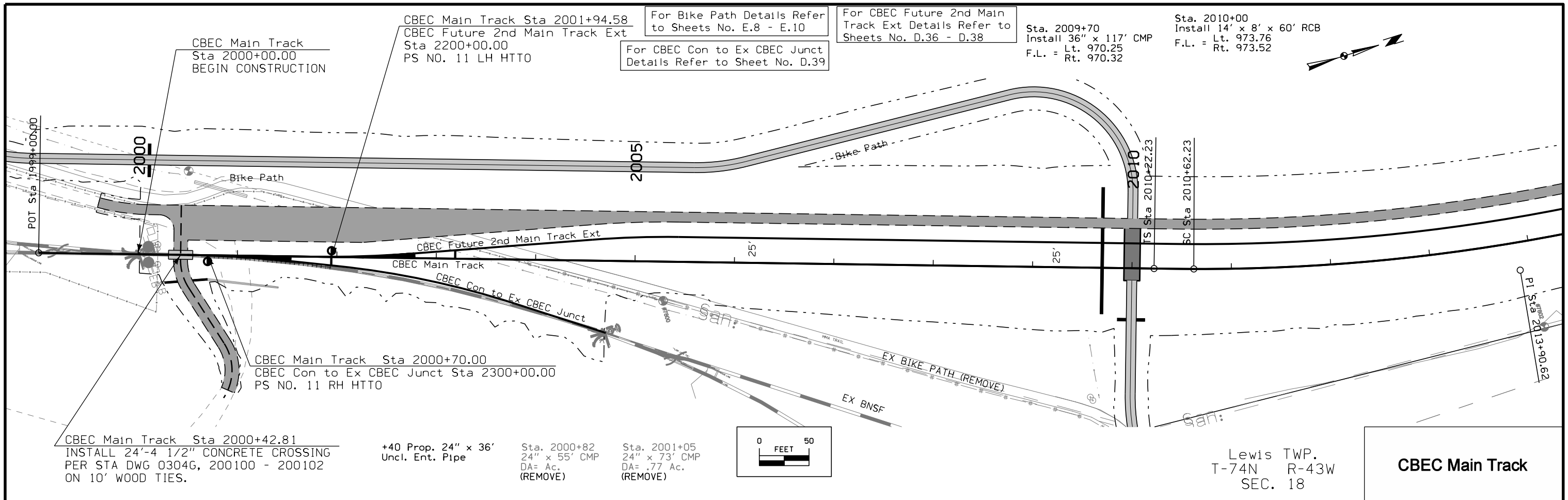












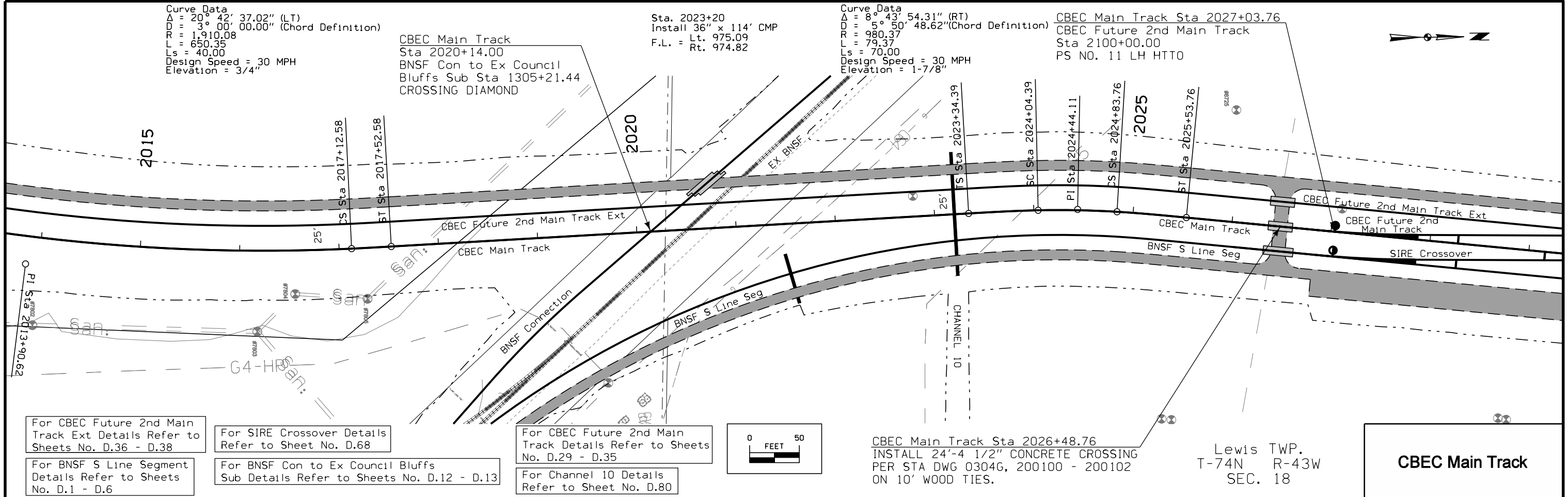
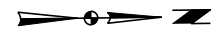
Curve Data
 $\Delta = 20^\circ 42' 37.02''$ (LT)
 $DD = 3^\circ 00' 00.00''$ (Chord Definition)
 $L = 1,910.08$
 $Ls = 650.35$
 $Lr = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

CBEC Main Track
 Sta 2020+14.00
 BNSF Con to Ex Council Bluffs Sub Sta 1305+21.44
 CROSSING DIAMOND

Sta. 2023+20
 Install 36" x 114' CMP
 F.L. = Lt. 975.09
 Rt. 974.82

Curve Data
 $\Delta = 8^\circ 43' 54.31''$ (RT)
 $DD = 5^\circ 50' 48.62''$ (Chord Definition)
 $L = 980.37$
 $Ls = 79.37$
 $Lr = 70.00$
 Design Speed = 30 MPH
 Elevation = 1-7/8"

CBEC Main Track Sta 2027+03.76
 CBEC Future 2nd Main Track
 Sta 2100+00.00
 PS NO. 11 LH HTTO



For CBEC Future 2nd Main Track Ext Details Refer to Sheets No. D.36 - D.38

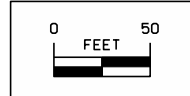
For SIRE Crossover Details Refer to Sheet No. D.68

For CBEC Future 2nd Main Track Details Refer to Sheets No. D.29 - D.35

For BNSF S Line Segment Details Refer to Sheets No. D.1 - D.6

For BNSF Con to Ex Council Bluffs Sub Details Refer to Sheets No. D.12 - D.13

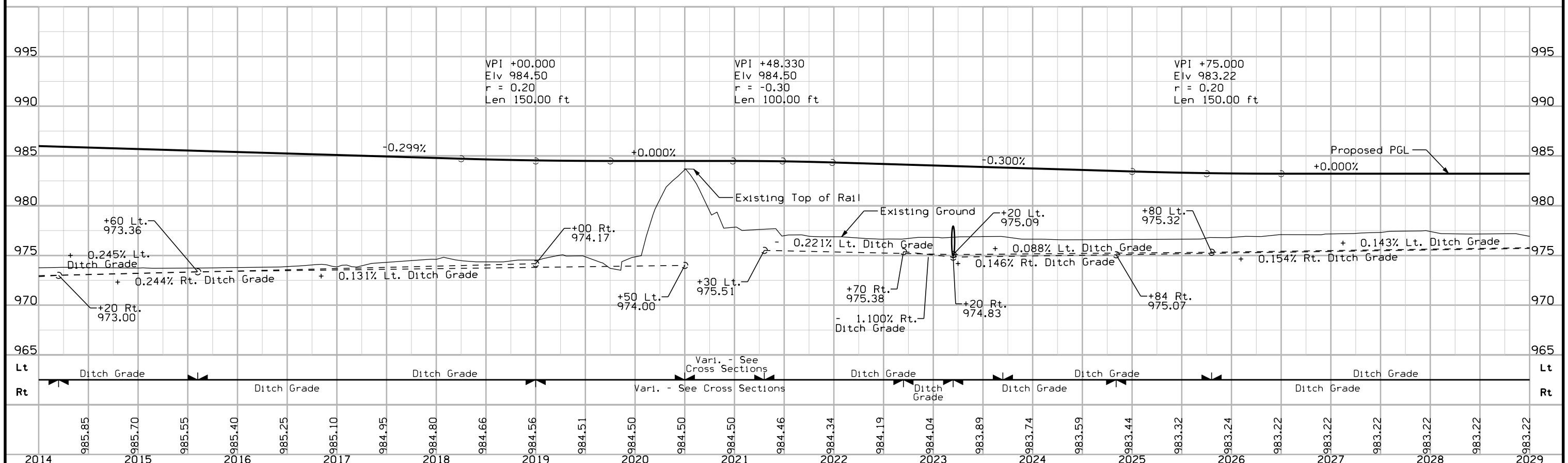
For Channel 10 Details Refer to Sheet No. D.80



CBEC Main Track Sta 2026+48.76
 INSTALL 24'-4 1/2" CONCRETE CROSSING
 PER STA DWG 03046, 200100 - 200102
 ON 10' WOOD TIES.

Lewis TWP.
 T-74N R-43W
 SEC. 18

CBEC Main Track

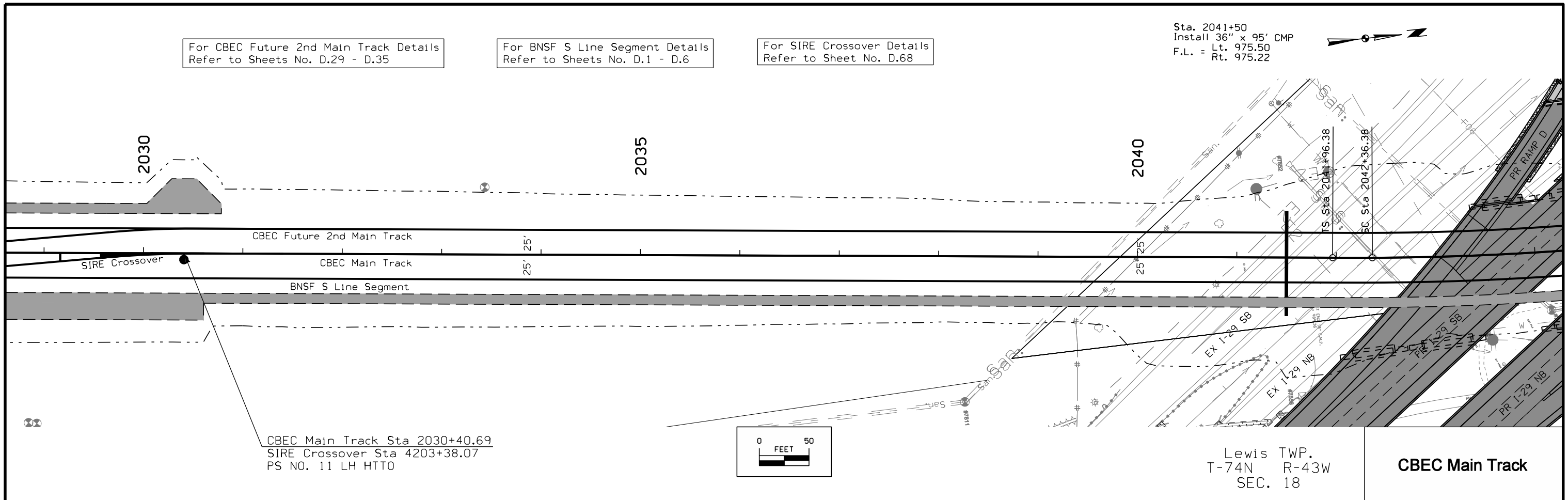


For CBEC Future 2nd Main Track Details
Refer to Sheets No. D.29 - D.35

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For SIRE Crossover Details
Refer to Sheet No. D.68

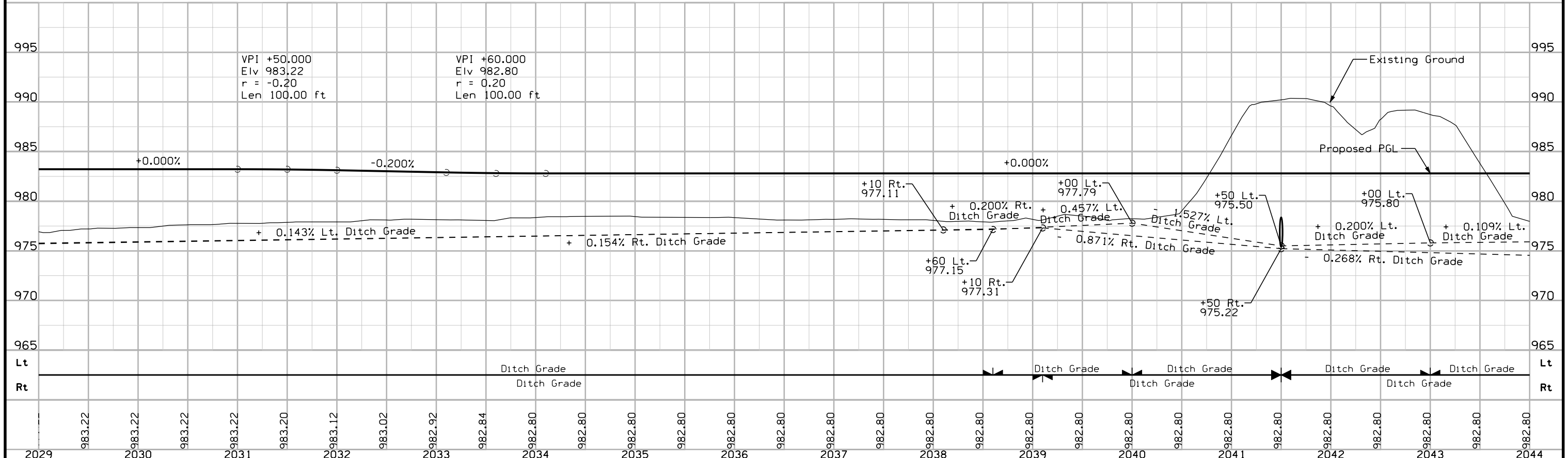
Sta. 2041+50
Install 36" x 95' CMP
F.L. = Lt. 975.50
Rt. 975.22



CBEC Main Track Sta 2030+40.69
SIRE Crossover Sta 4203+38.07
PS NO. 11 LH HTTO

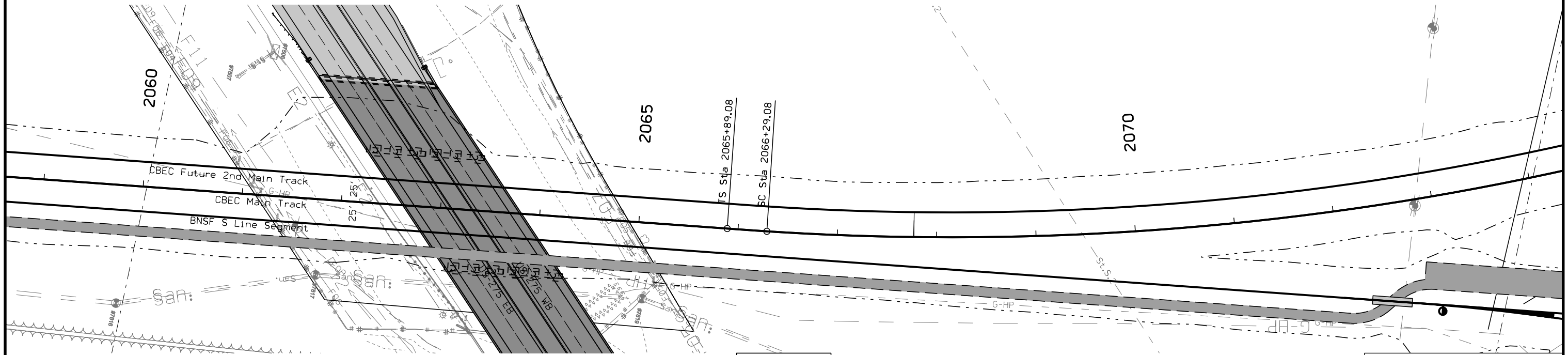
Lewis TWP.
T-74N R-43W
SEC. 18

CBEC Main Track



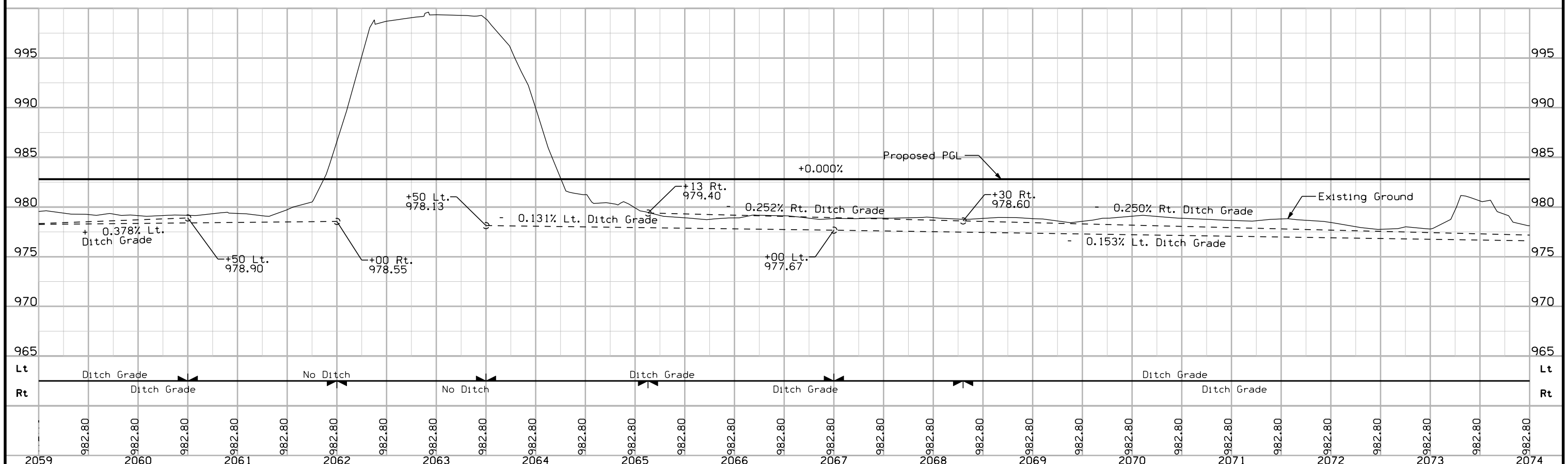
For CBEC Future 2nd Main Track Details
Refer to Sheets No. D.29 - D.35

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6



Lewis TWP.
T-74N R-43W
SEC. 7

CBEC Main Track



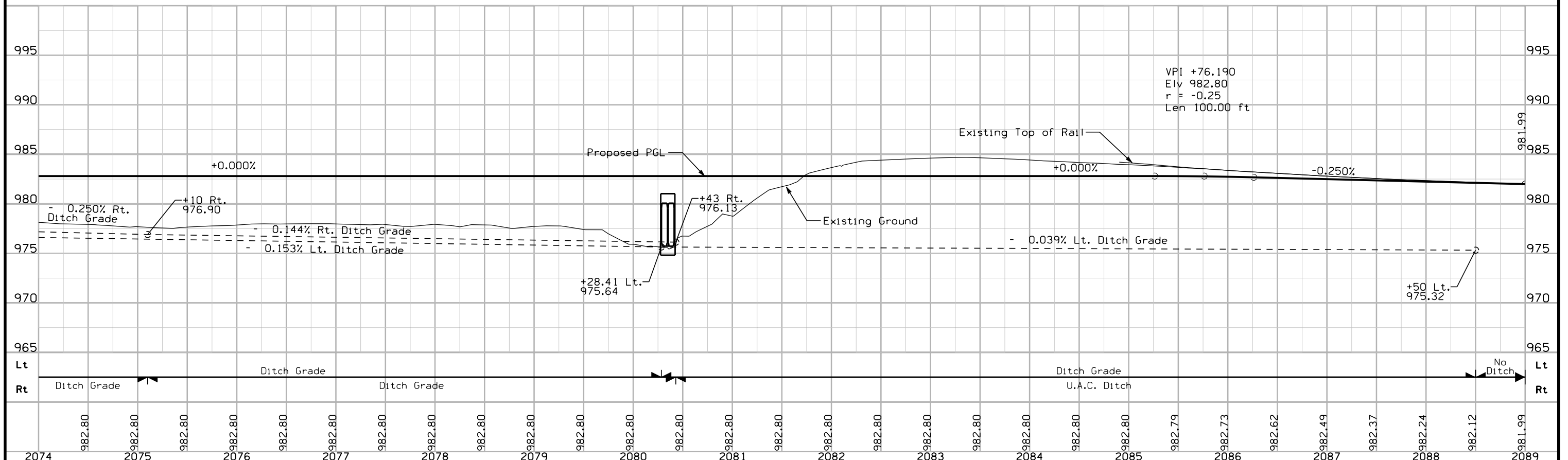
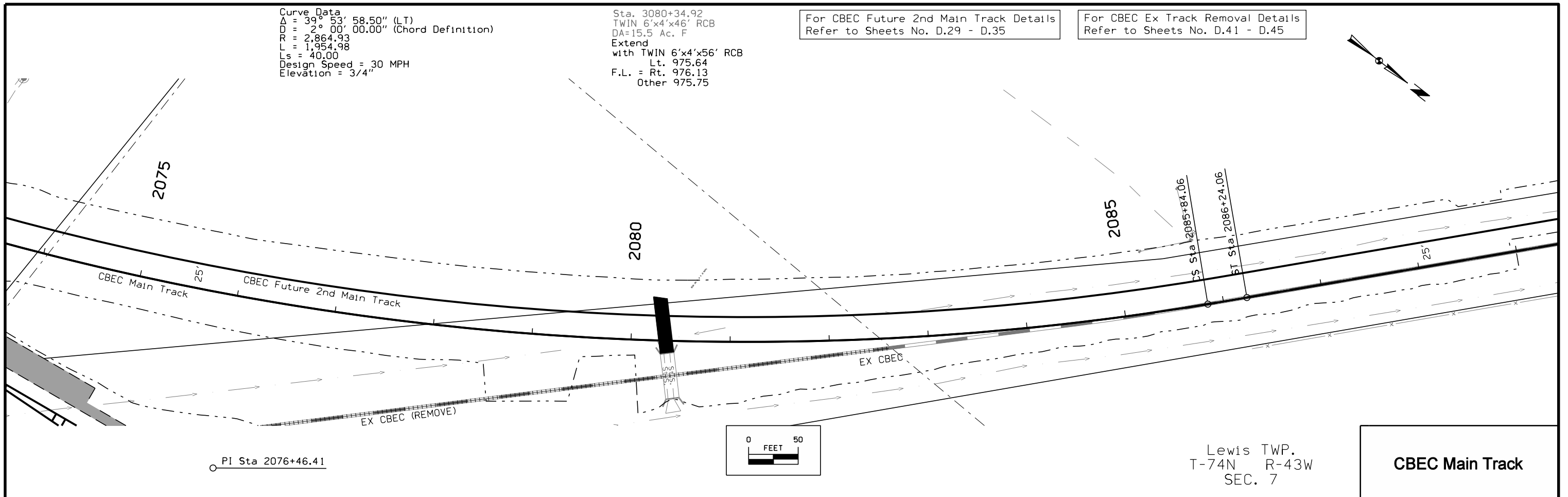
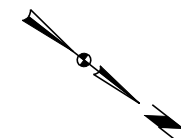
ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER	IM-029-2(55)49--13-78	SHEET NUMBER	D.26
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Curve Data
 $\Delta = 39^\circ 53' 58.50''$ (LT)
 $D = 2^\circ 00' 00.00''$ (Chord Definition)
 $R = 2,864.93$
 $L = 1,954.98$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

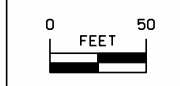
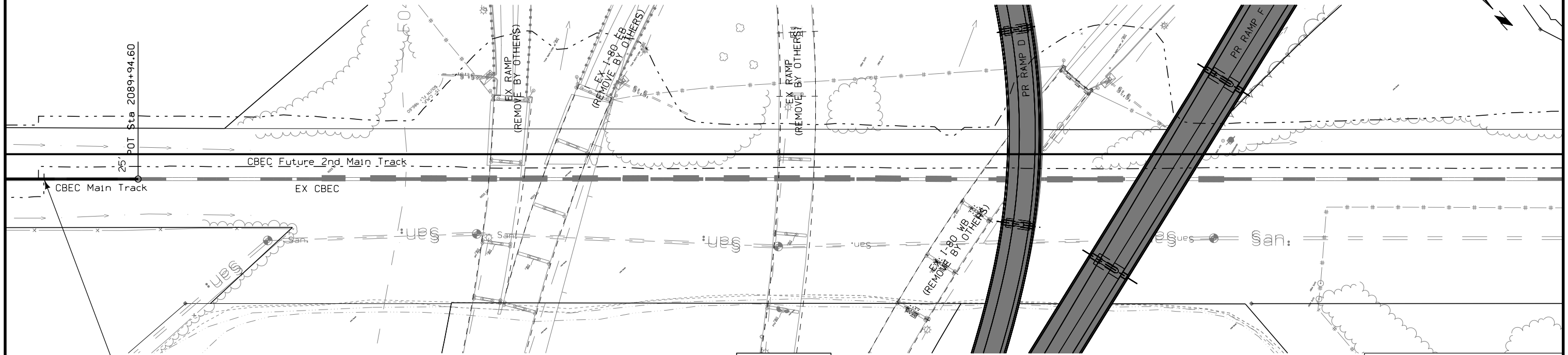
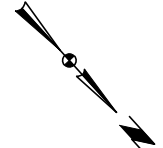
Sta. 3080+34.92
 TWIN 6'x4'x46' RCB
 DA=15.5 Ac. F
 Extend
 with TWIN 6'x4'x56' RCB
 Lt. 975.64
 F.L. = Rt. 976.13
 Other 975.75

For CBEC Future 2nd Main Track Details
 Refer to Sheets No. D.29 - D.35

For CBEC Ex Track Removal Details
 Refer to Sheets No. D.41 - D.45



For CBEC Future 2nd Main Track Details
Refer to Sheets No. D.29 - D.35



Lewis TWP.
T-74N R-43W
SEC. 7

CBEC Main Track



Sta. 1042+47 (LEVEE UNIT 3)
 24" x 59' CMP
 DA= Ac.
 (REMOVE)

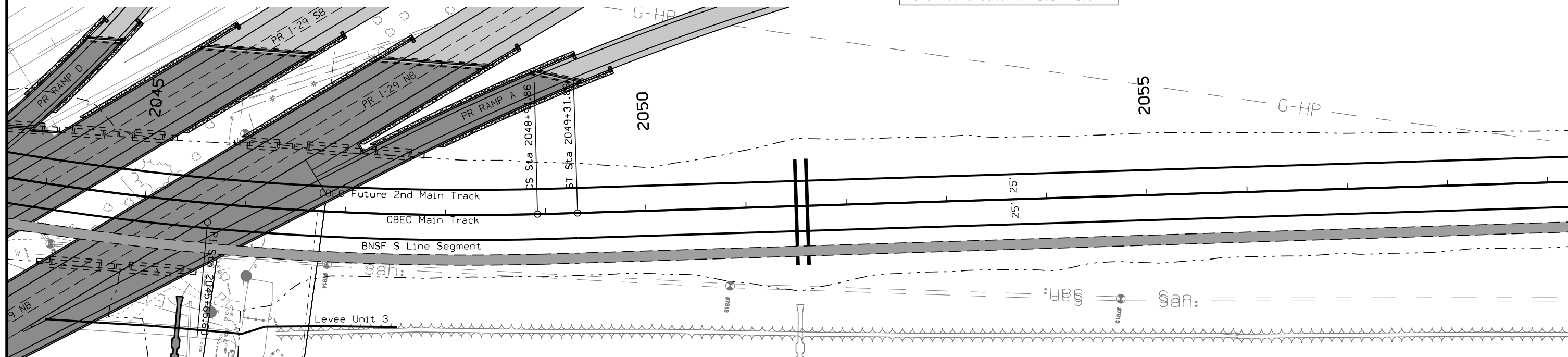
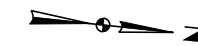
Sta. 1042+60 (LEVEE UNIT 3)
 Install 36" x 48' RCP
 F.L. = Lt. 974.12
 F.L. = Rt. 973.49

Sta. 2051+50
 Install 36" x 95' CMP
 F.L. = Lt. 975.50
 F.L. = Rt. 975.28

Sta. 2051+61
 Install 36" x 95' CMP
 F.L. = Lt. 975.50
 F.L. = Rt. 975.28

For CBEC Future 2nd Main Track Details
 Refer to Sheets No. D.29 - D.35

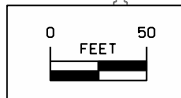
For BNSF S Line Segment Details
 Refer to Sheets No. D.1 - D.6



Lewis TWP.
 T-74N R-43W
 SEC. 18

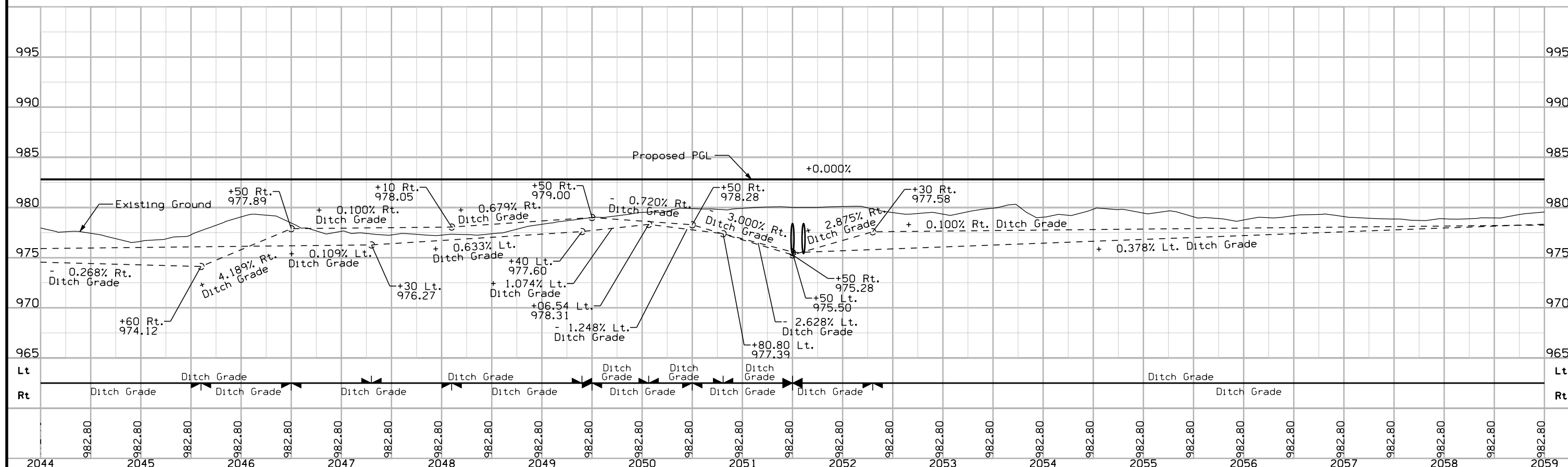
Curve Data
 $\Delta = 14^\circ 01' 54.91''$ (LT)
 $D = 2^\circ 01' 03.40''$ (Chord Definition)
 $R = 2,839.93$
 $L = 655.47$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

Sta. 2051+50, RT
 42" x 42' RCP
 DA= 20.8 Ac. R-F



Lewis TWP.
 T-74N R-43W
 SEC. 7

CBEC Main Track



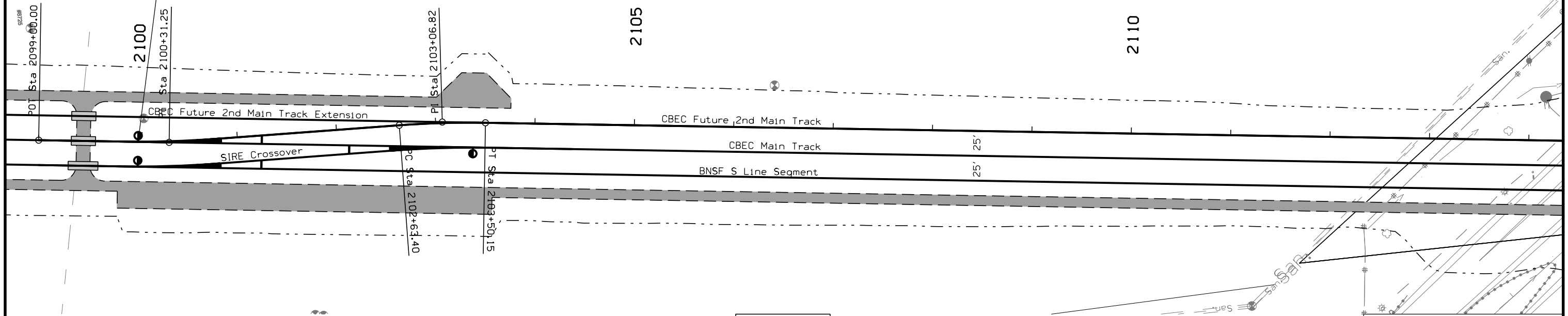
CBEC Future 2nd Main Track Sta 2100+00.00
 CBEC Main Track Sta 2027+03.76
 PS NO. 11 LH HTTO
 BEGIN CONSTRUCTION

For BNSF S Line Segment Details
 Refer to Sheets No. D.1 - D.6

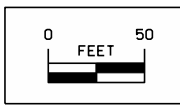
For CBEC Main Track Details
 Refer to Sheets No. D.22 - D.28

For SIRE Crossover Details
 Refer to Sheets No. D.68

For CBEC Future 2nd Main Track Extension
 Details Refer to Sheets No. D.36 - D.38

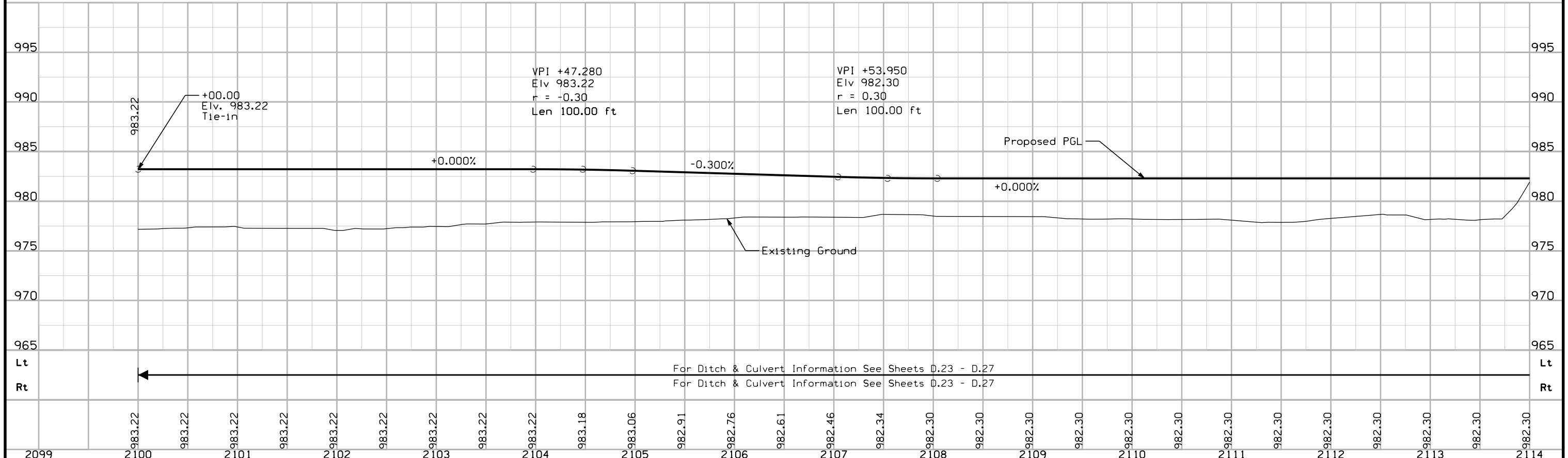


Curve Data
 $\Delta = 5^\circ 12' 18.00''$ (RT)
 $D = 6^\circ 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $L = 86.79$
 Design Speed = 20 MPH



Lewis TWP.
 T-74N R-43W
 SEC. 18

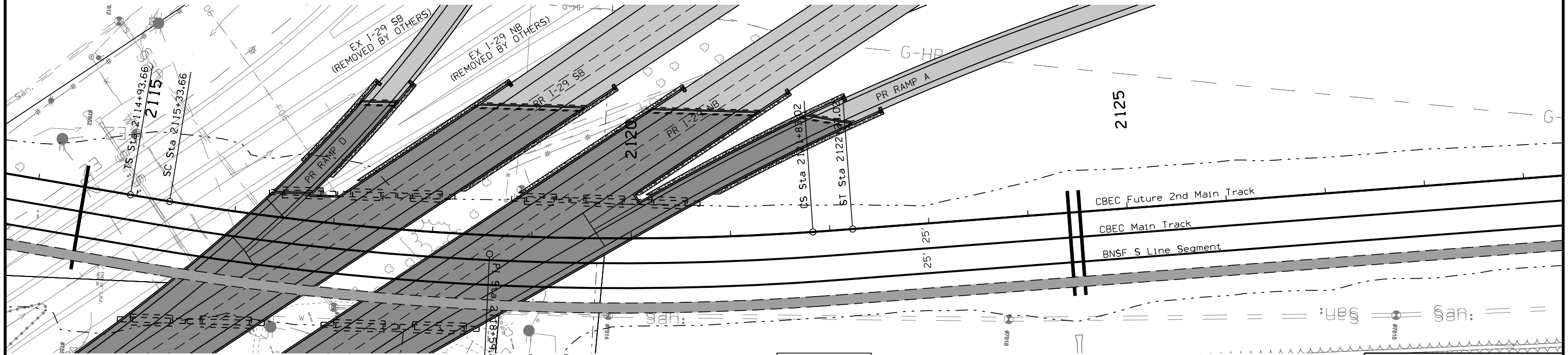
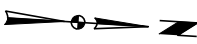
**CBEC
 Future 2nd Main Track**



For Ditch & Culvert Information See Sheets D.23 - D.27

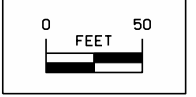
For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28



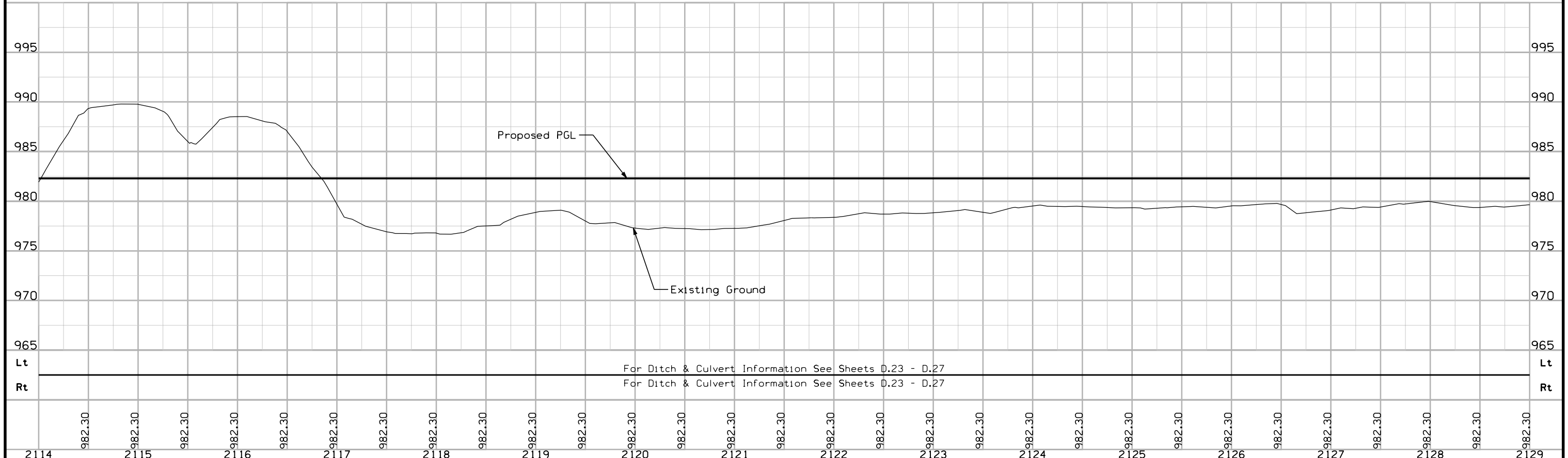
Lewis TWP.
T-74N R-43W
SEC. 18

Curve Data
 $\Delta = 14^\circ 01' 54.91''$ (RT)
 $D = 2^\circ 02' 07.92''$ (Chord Definition)
 $R = 2,814.93$
 $L = 649.35$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"



Lewis TWP.
T-74N R-43W
SEC. 7

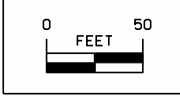
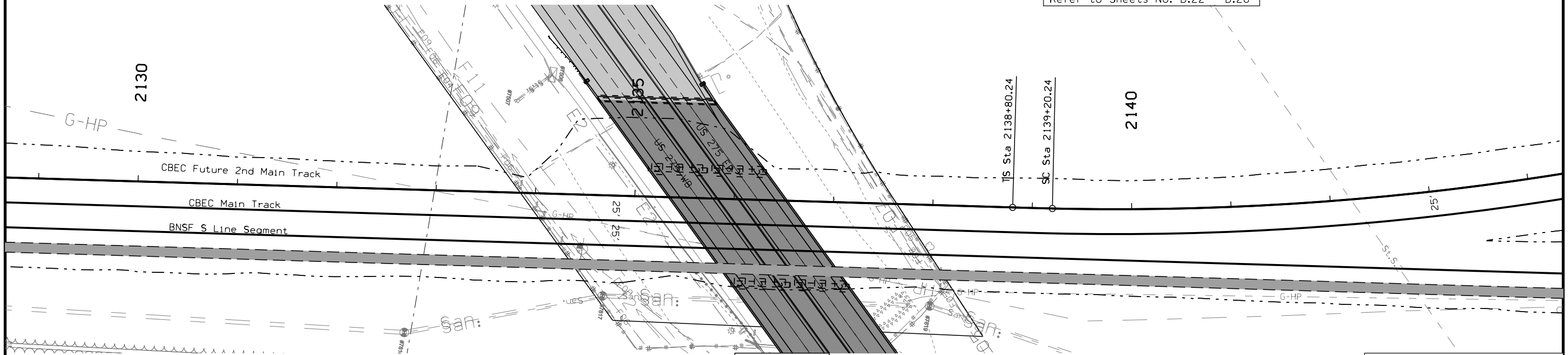
**CBEC
Future 2nd Main Track**



For Ditch & Culvert Information See Sheets D.23 - D.27
 For Ditch & Culvert Information See Sheets D.23 - D.27

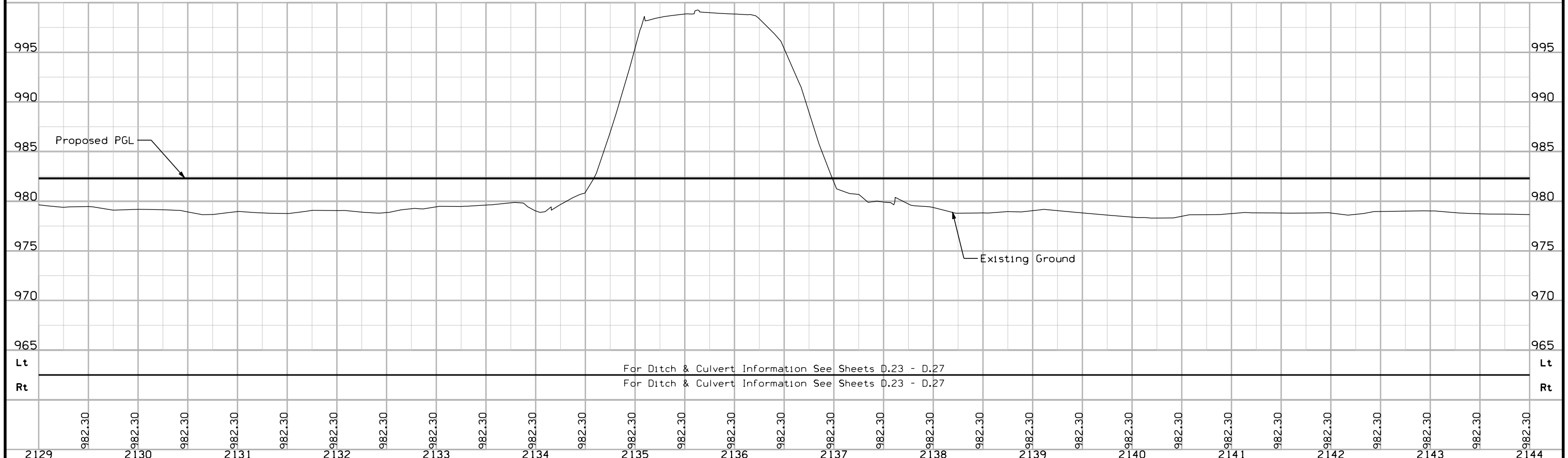
For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28



Lewis TWP.
T-74N R-43W
SEC. 7

**CBEC
Future 2nd Main Track**



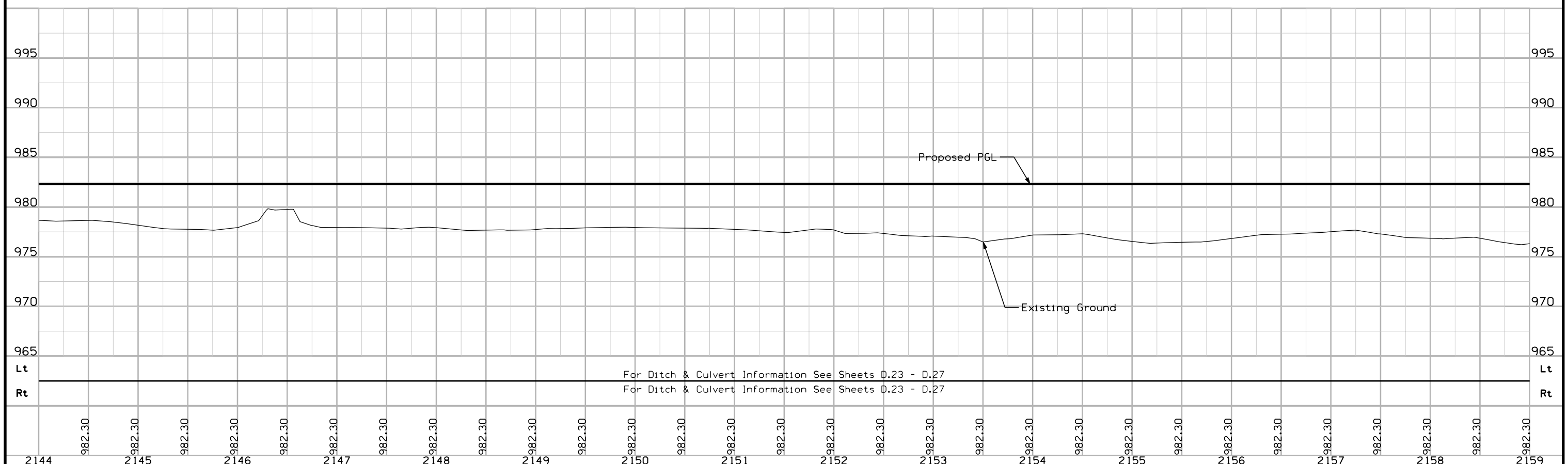
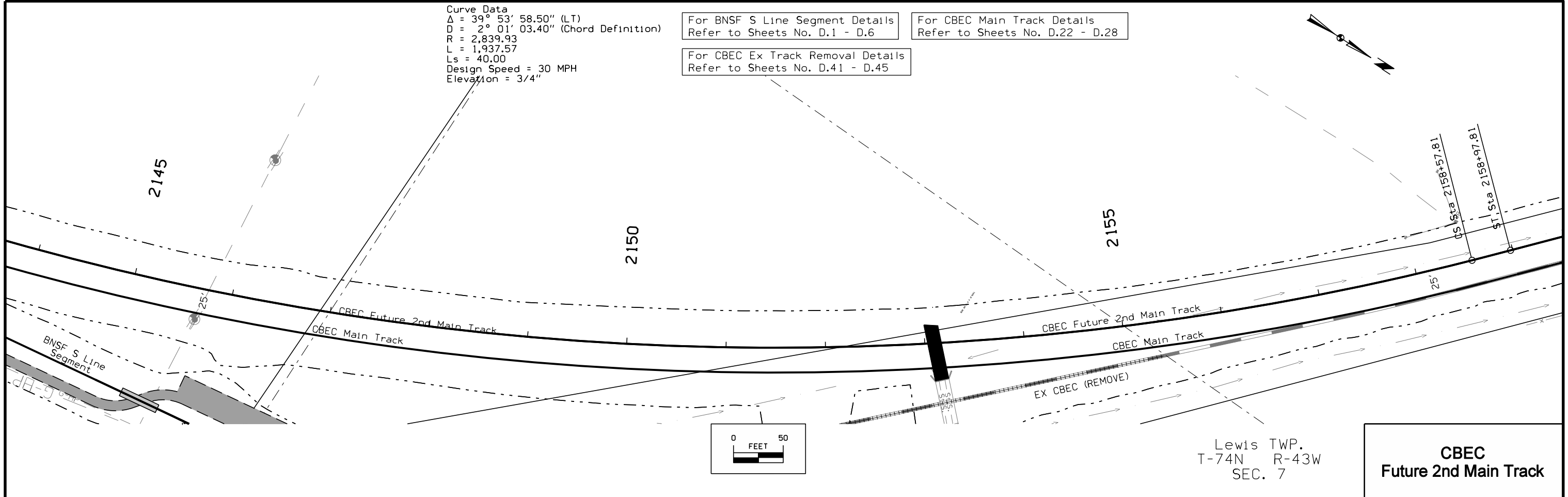
For Ditch & Culvert Information See Sheets D.23 - D.27
For Ditch & Culvert Information See Sheets D.23 - D.27

Curve Data
 $\Delta = 39^\circ 53' 58.50''$ (LT)
 $D = 2^\circ 01' 03.40''$ (Chord Definition)
 $R = 2,839.93$
 $L = 1,937.57$
 $L_s = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

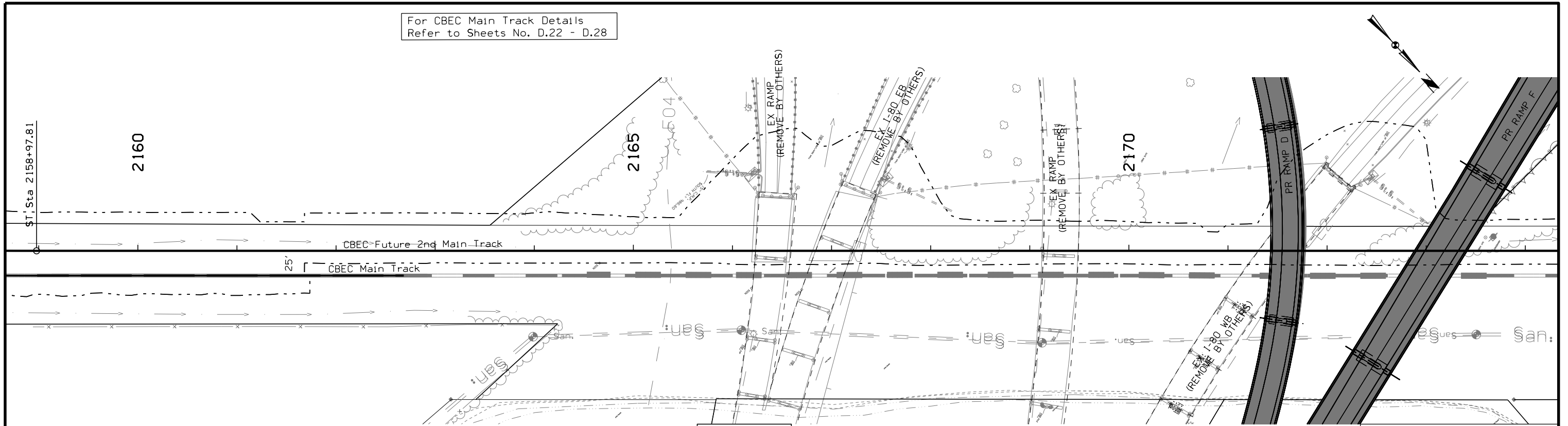
For BNSF S Line Segment Details
 Refer to Sheets No. D.1 - D.6

For CBEC Main Track Details
 Refer to Sheets No. D.22 - D.28

For CBEC Ex Track Removal Details
 Refer to Sheets No. D.41 - D.45

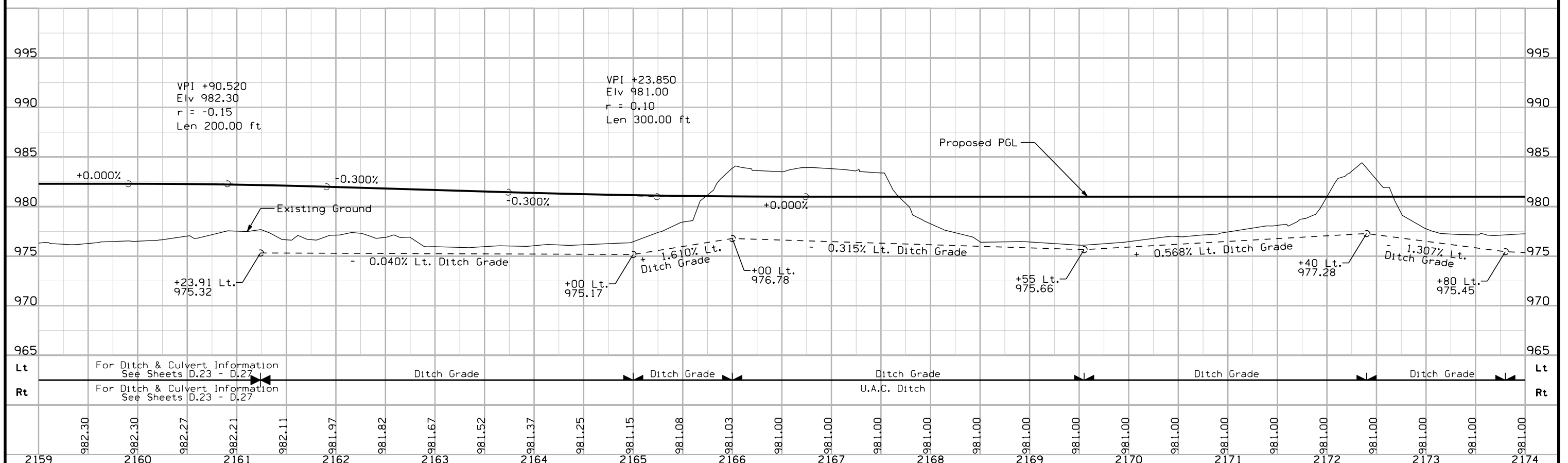


For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28



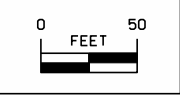
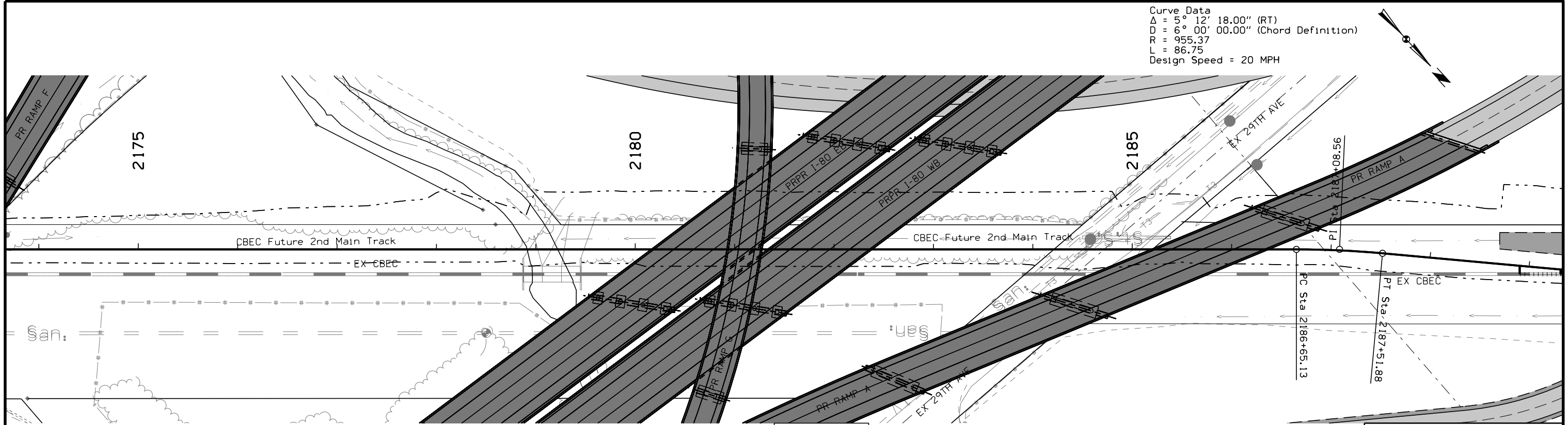
Lewis TWP.
T-74N R-43W
SEC. 7

**CBEC
Future 2nd Main Track**



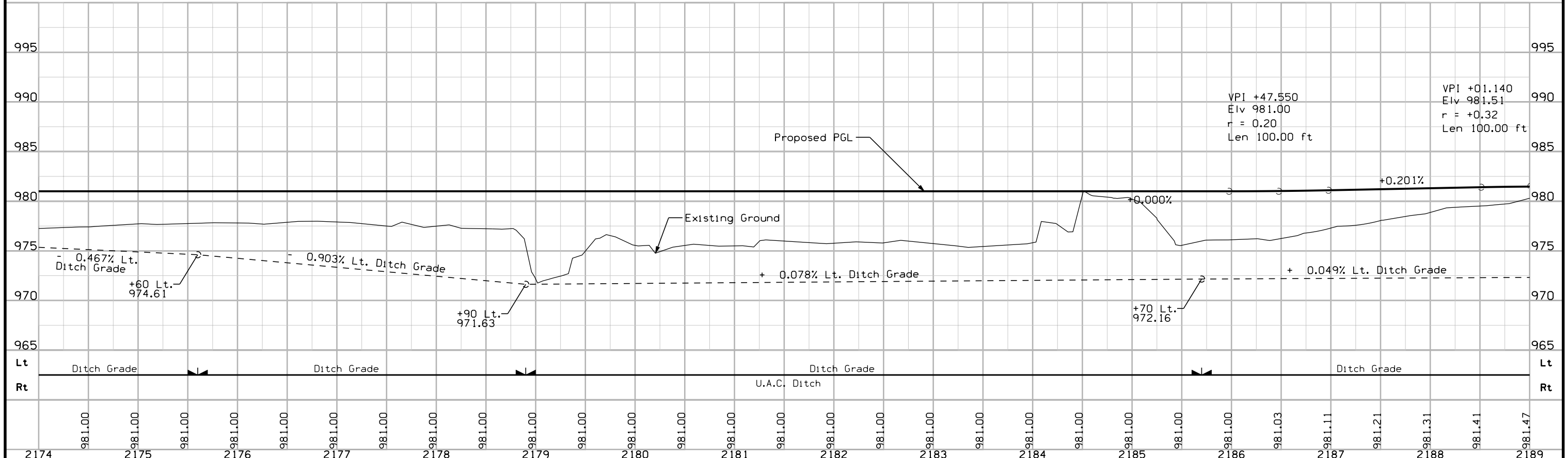
English	IOWA DOT	DESIGN TEAM	Iowa DOT\HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER	IM-029-2(55)49--13-78	SHEET NUMBER	D.33
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Curve Data
 $\Delta = 5^{\circ} 12' 18.00''$ (RT)
 $D = 6^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $L = 86.75$
 Design Speed = 20 MPH



Lewis TWP.
 T-74N R-43W
 SEC. 7

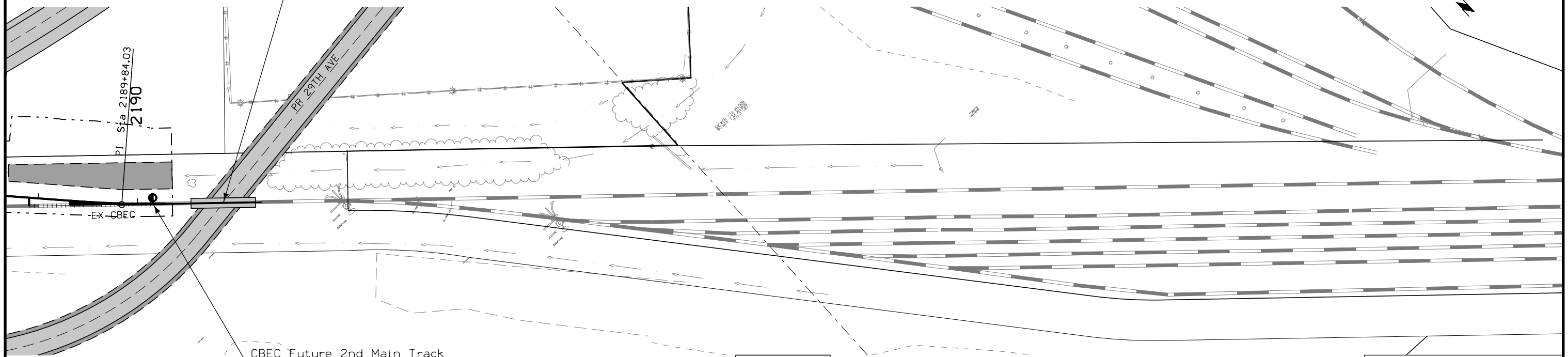
**CBEC
 Future 2nd Main Track**



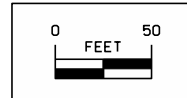
2174	981.00	2175	981.00	2176	981.00	2177	981.00	2178	981.00	2179	981.00	2180	981.00	2181	981.00	2182	981.00	2183	981.00	2184	981.00	2185	981.00	2186	981.00	2187	981.03	2188	981.11	2189	981.47
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CBEC Future 2nd Main Track Sta 2191+06.31

INSTALL 65'-0" CONCRETE CROSSING
PER STA DWG 0304G, 200100 - 200102
ON 10' WOOD TIES.

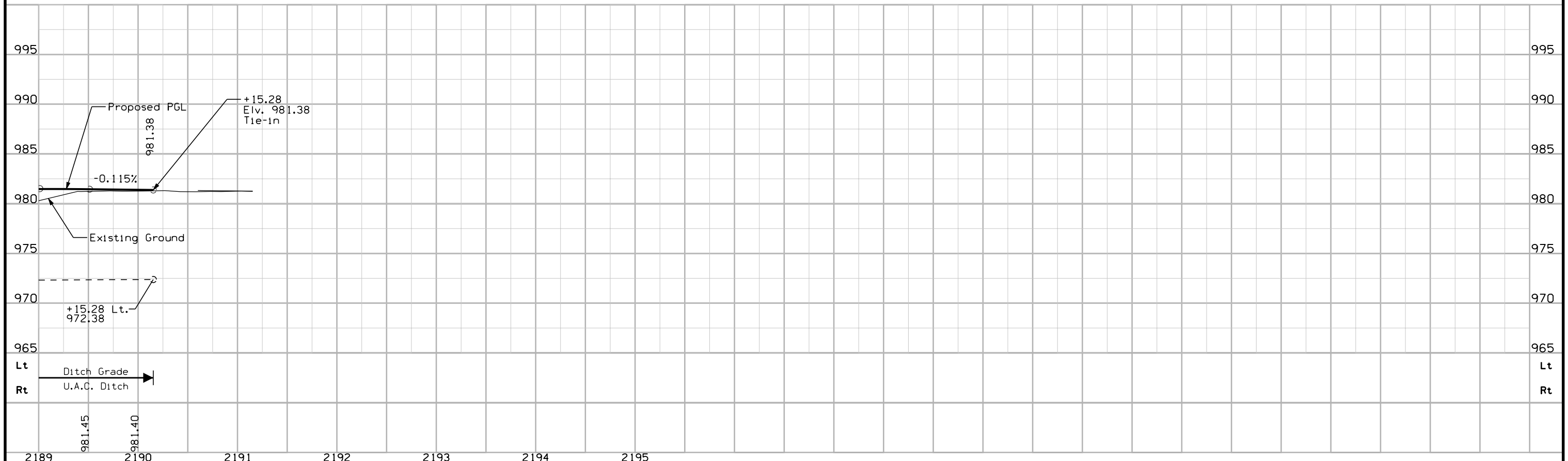


CBEC Future 2nd Main Track
Sta 2190+15.28
EX CBEC Sta 147+52.86
PS NO. 11 RH HTTO
END CONSTRUCTION



Lewis TWP.
T-74N R-44W
SEC. 1

**CBEC
Future 2nd Main Track**



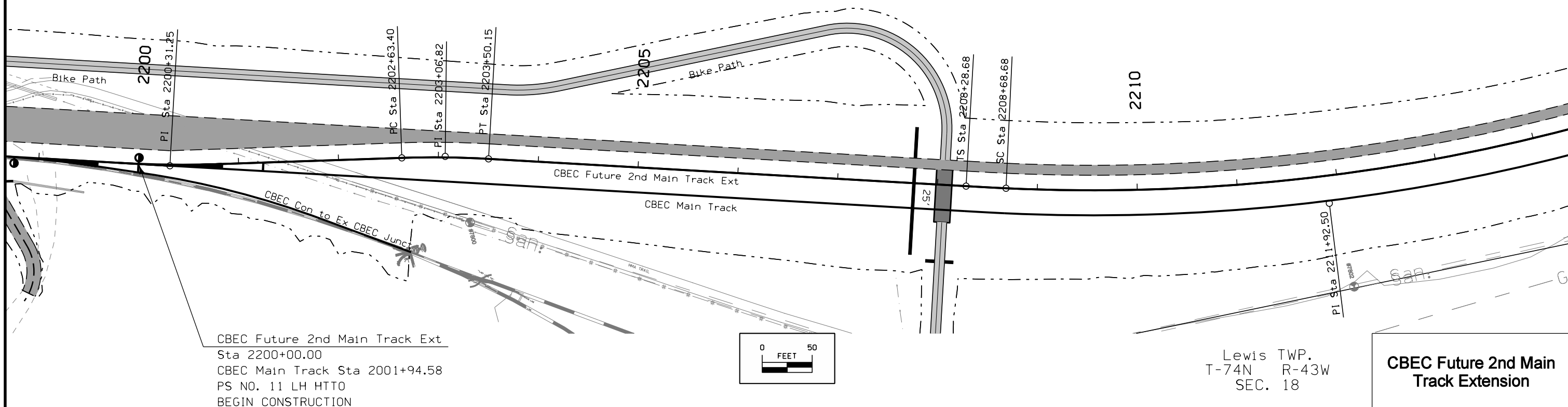
For Bike Path Details Refer to Sheets No. E.8 - E.10

For CBEC Main Track Details Refer to Sheets No. D.22 - D.28

Curve Data
 $\Delta = 12^\circ 18.00''$ (RT)
 $D = 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $Ls = 86.75$
 Design Speed = 20 MPH

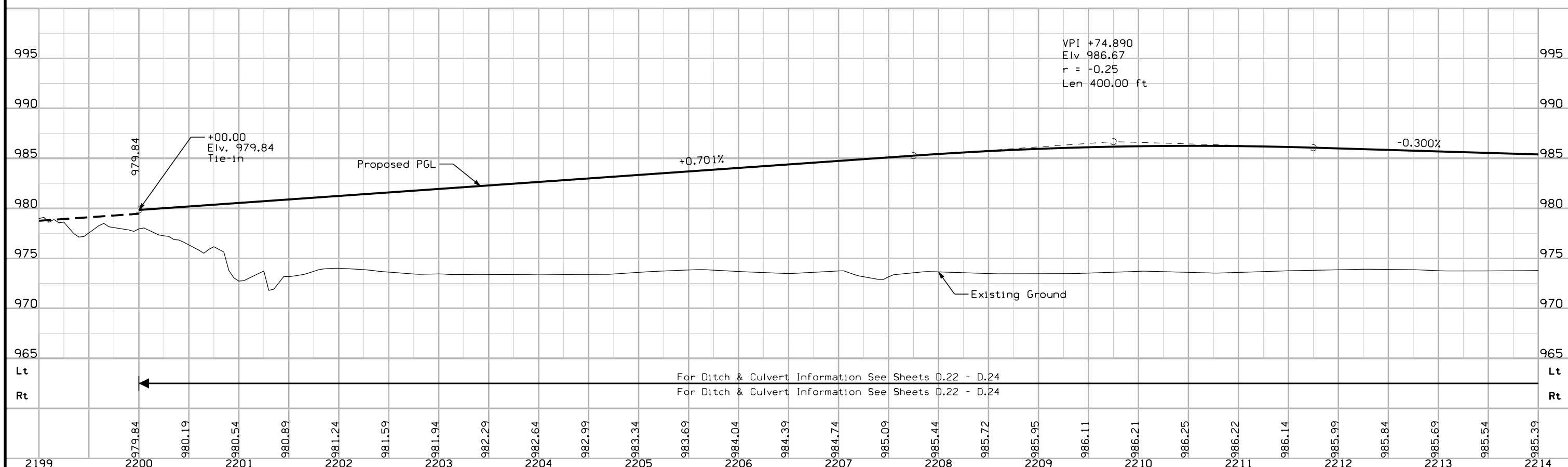
For CBEC Con to Ex CBEC Junct Details Refer to Sheet No. D.39

Curve Data
 $\Delta = 20^\circ 42' 37.02''$ (LT)
 $D = 3^\circ 02' 23.31''$ (Chord Definition)
 $R = 1,885.07$
 $L = 641.31$
 $Ls = 40.00$
 Design Speed = 30 MPH
 Elevation = 3/4"

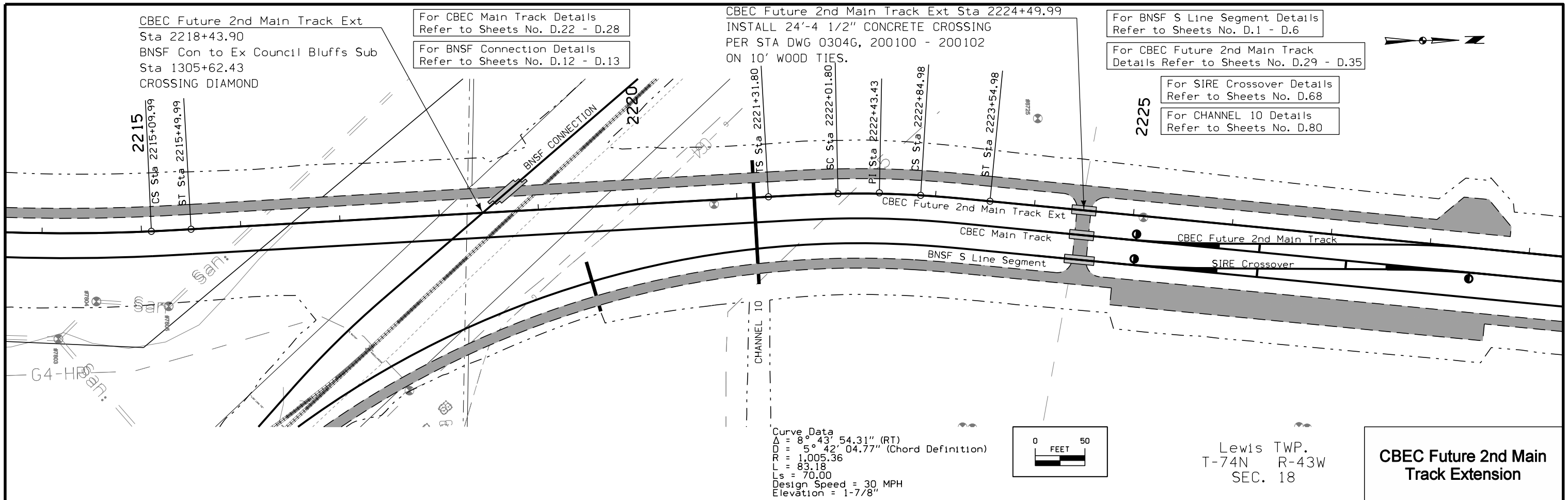


CBEC Future 2nd Main Track Ext
 Sta 2200+00.00
 CBEC Main Track Sta 2001+94.58
 PS NO. 11 LH HTTO
 BEGIN CONSTRUCTION

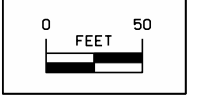
CBEC Future 2nd Main Track Extension



For Ditch & Culvert Information See Sheets D.22 - D.24
 For Ditch & Culvert Information See Sheets D.22 - D.24

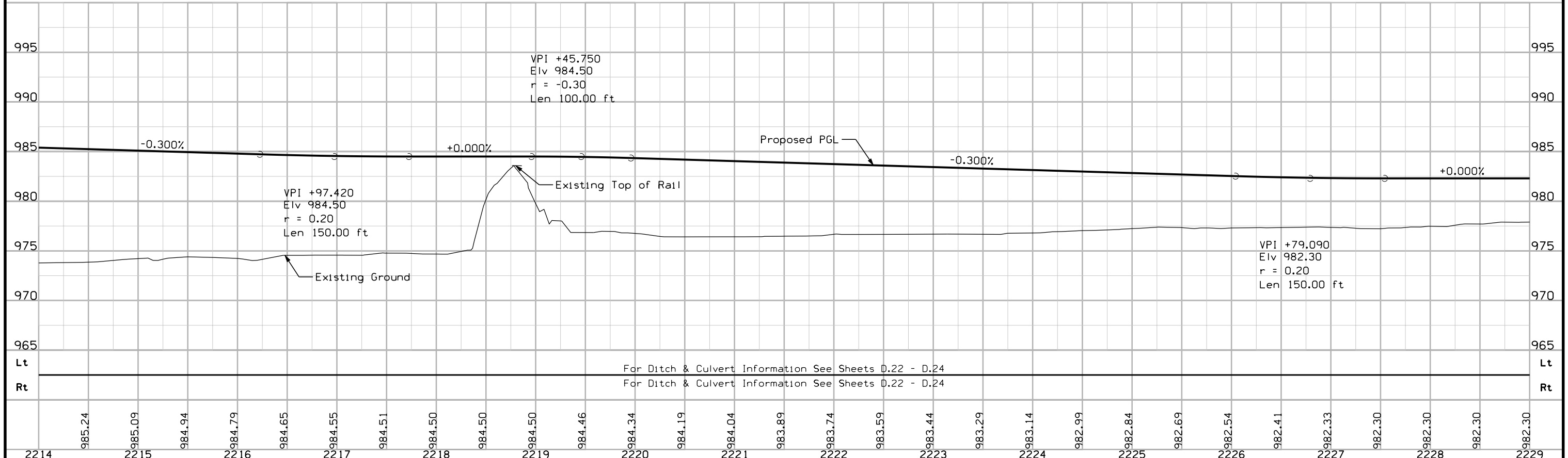


Curve Data
 $\Delta = 8^{\circ} 43' 54.31''$ (RT)
 $D = 5^{\circ} 42' 04.77''$ (Chord Definition)
 $R = 1,005.36$
 $L = 83.18$
 $L_s = 70.00$
 Design Speed = 30 MPH
 Elevation = 1-7/8"



Lewis TWP.
 T-74N R-43W
 SEC. 18

CBEC Future 2nd Main Track Extension

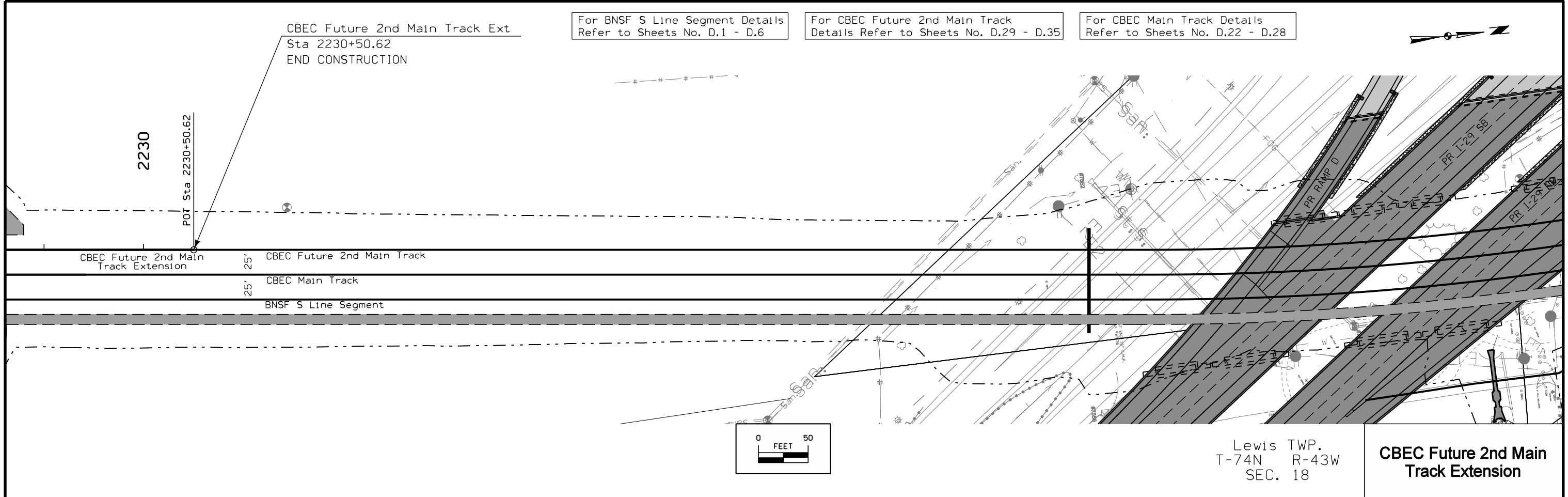


For Ditch & Culvert Information See Sheets D.22 - D.24

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For CBEC Future 2nd Main Track
Details Refer to Sheets No. D.29 - D.35

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28



Lewis TWP.
T-74N R-43W
SEC. 18

**CBEC Future 2nd Main
Track Extension**

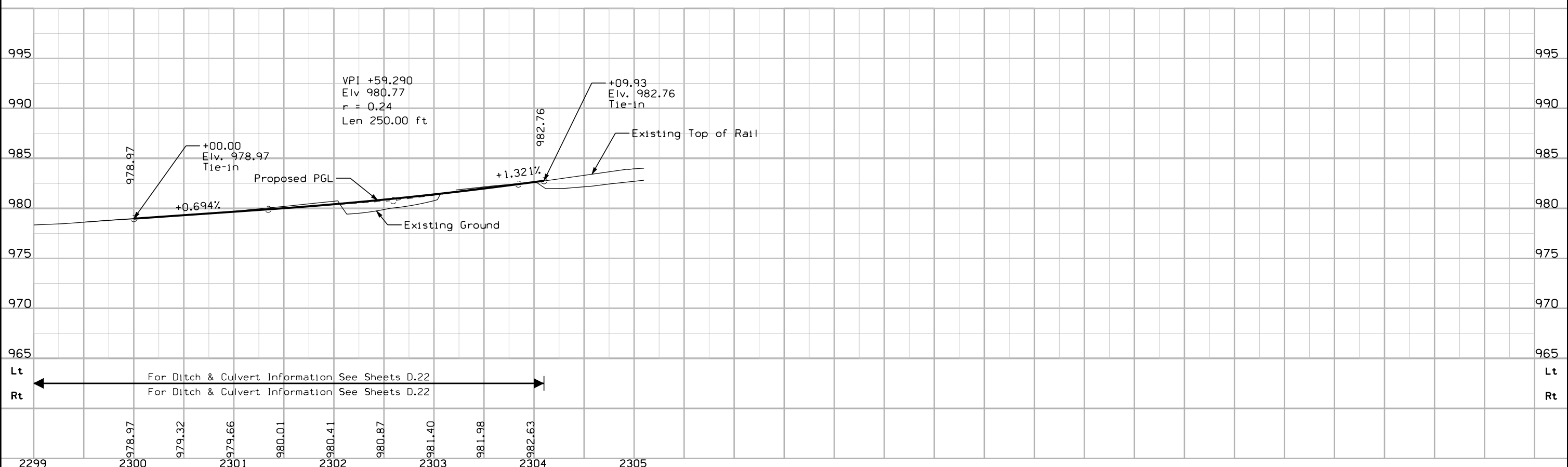
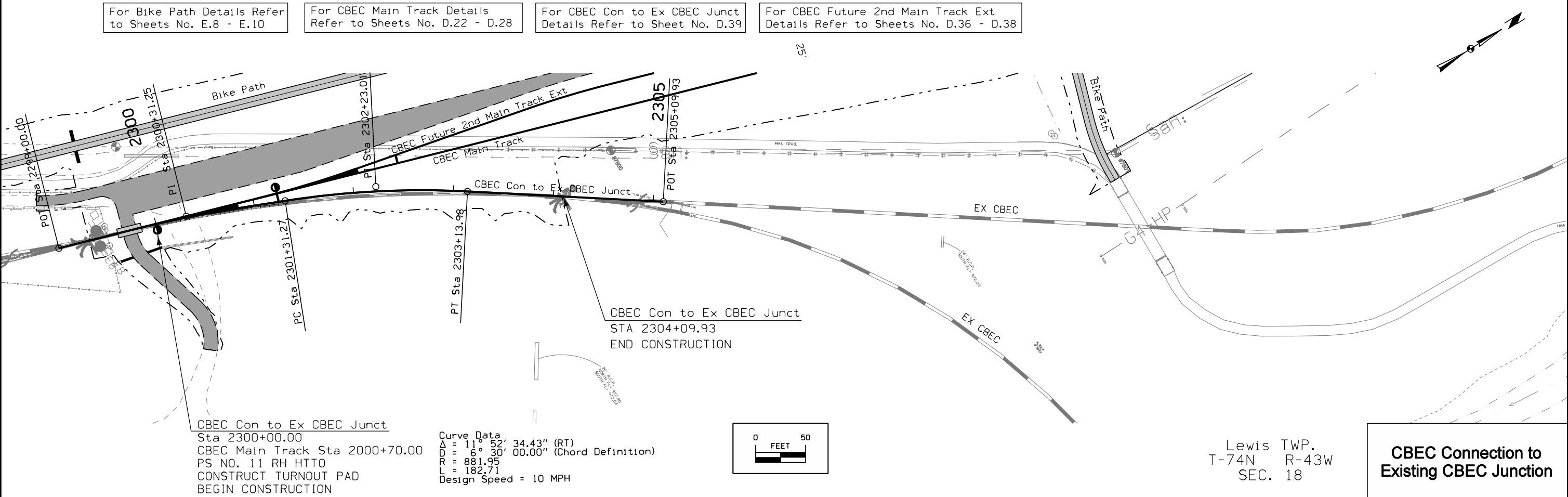


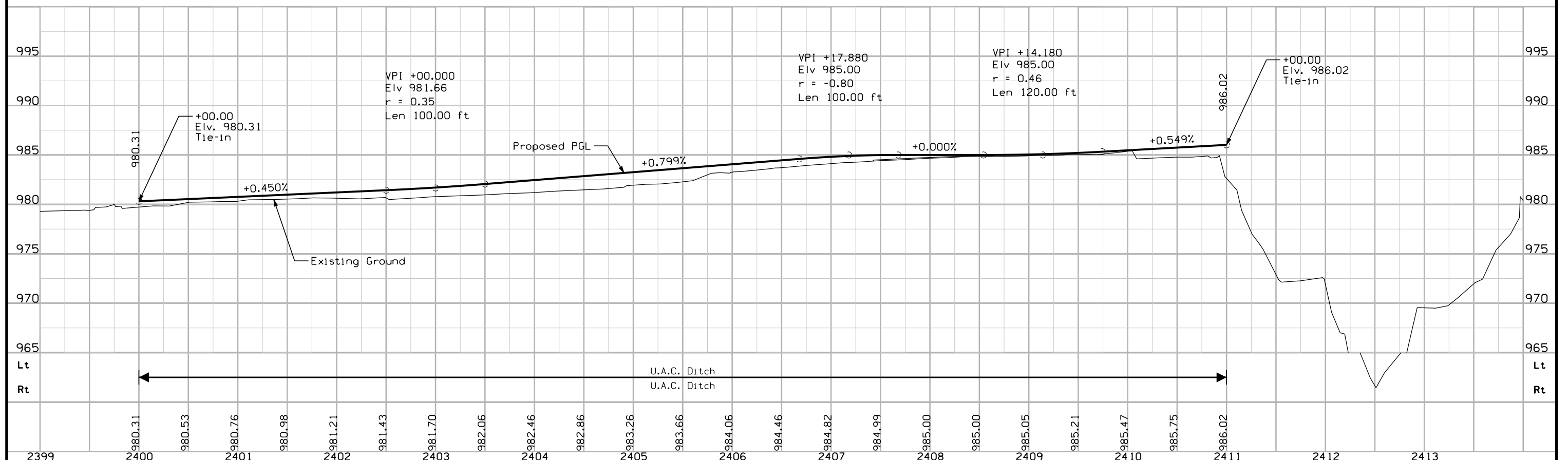
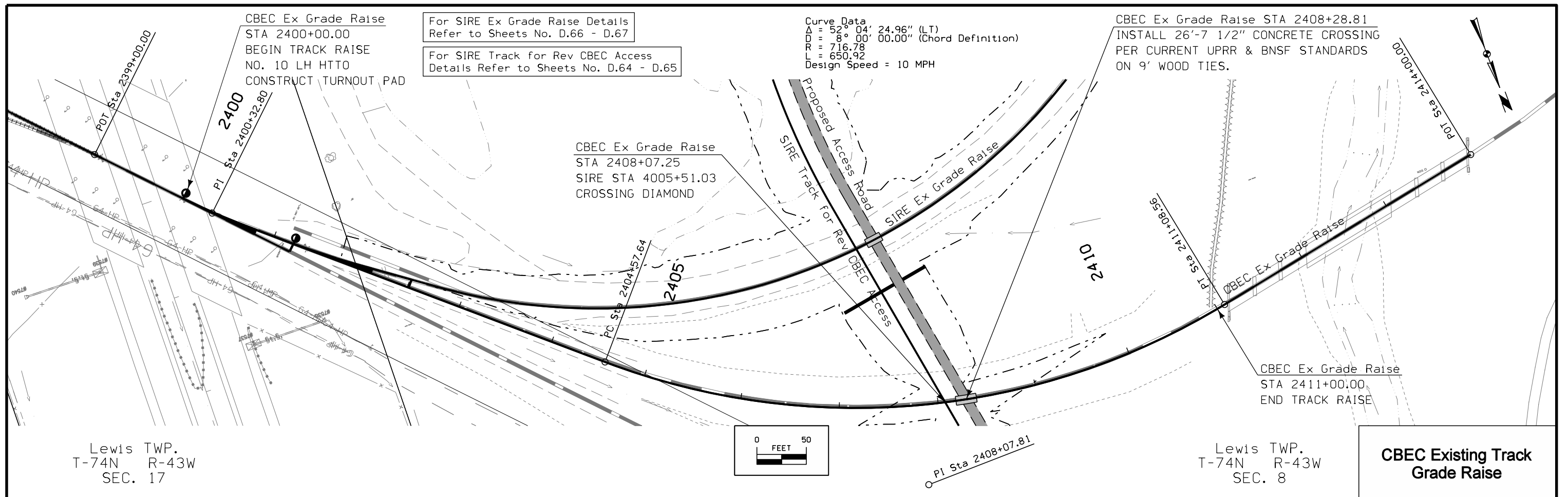
For Bike Path Details Refer to Sheets No. E.8 - E.10

For CBEC Main Track Details Refer to Sheets No. D.22 - D.28

For CBEC Con to Ex CBEC Junct Details Refer to Sheet No. D.39

For CBEC Future 2nd Main Track Ext Details Refer to Sheets No. D.36 - D.38



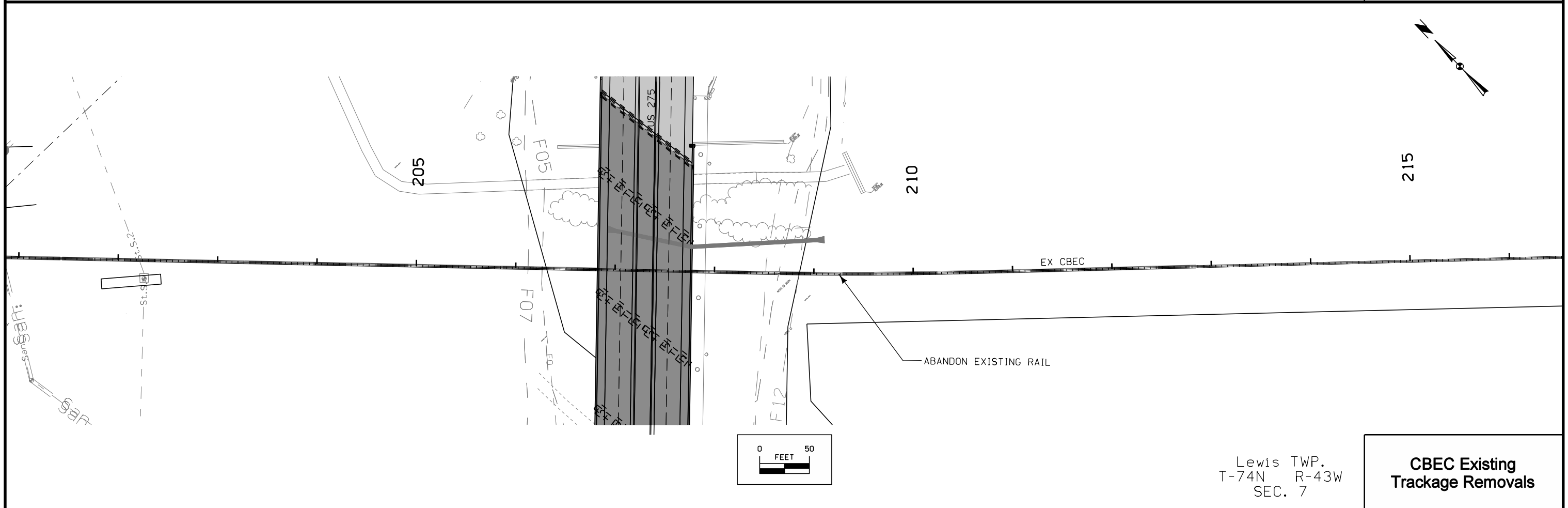
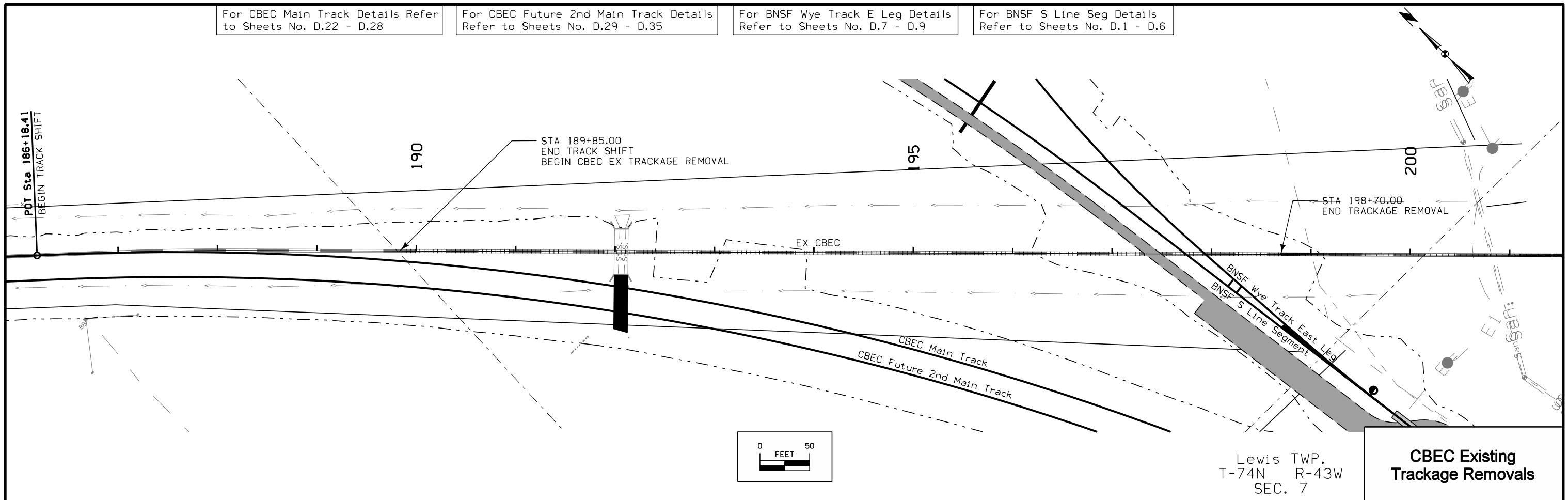


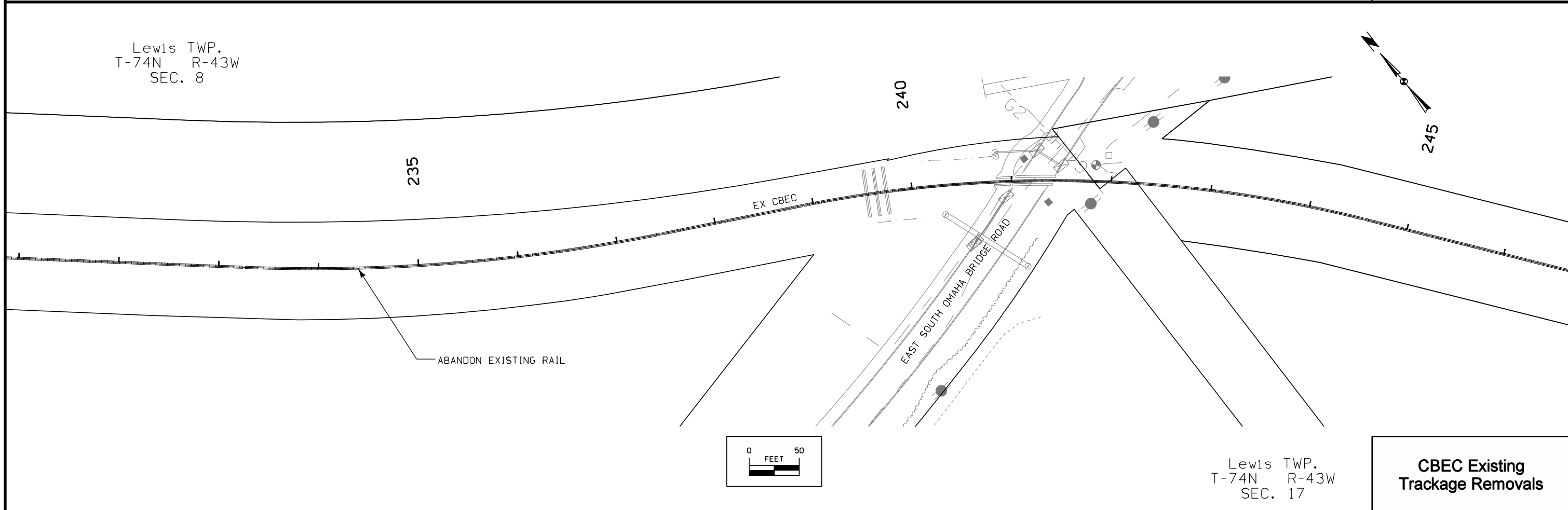
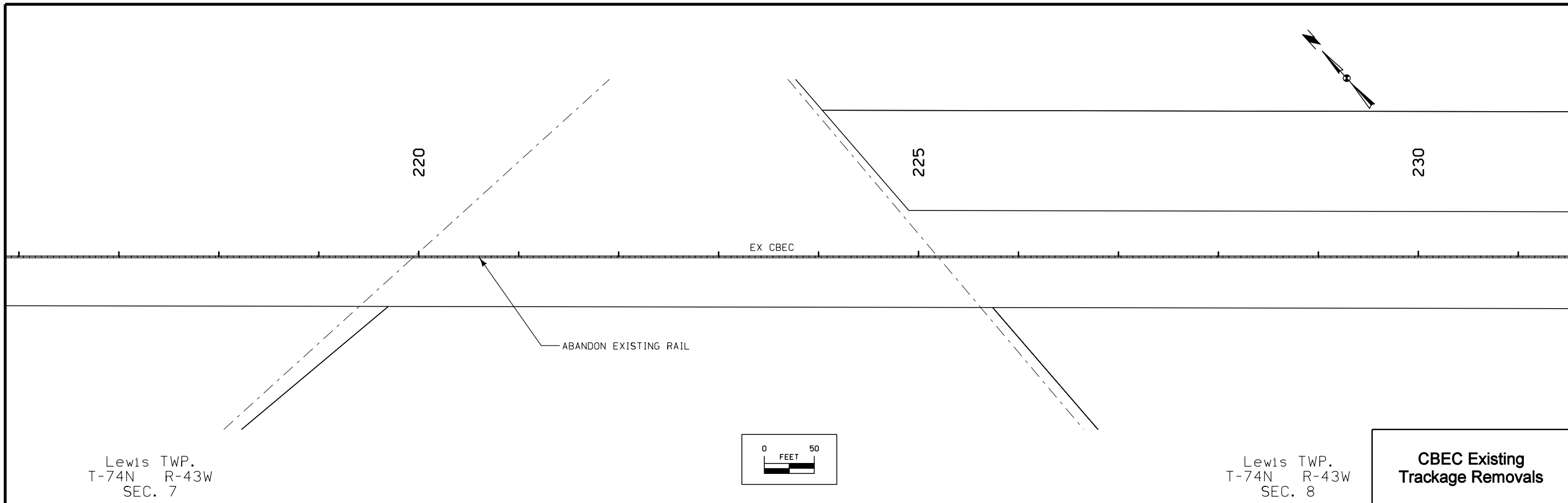
For CBEC Main Track Details Refer to Sheets No. D.22 - D.28

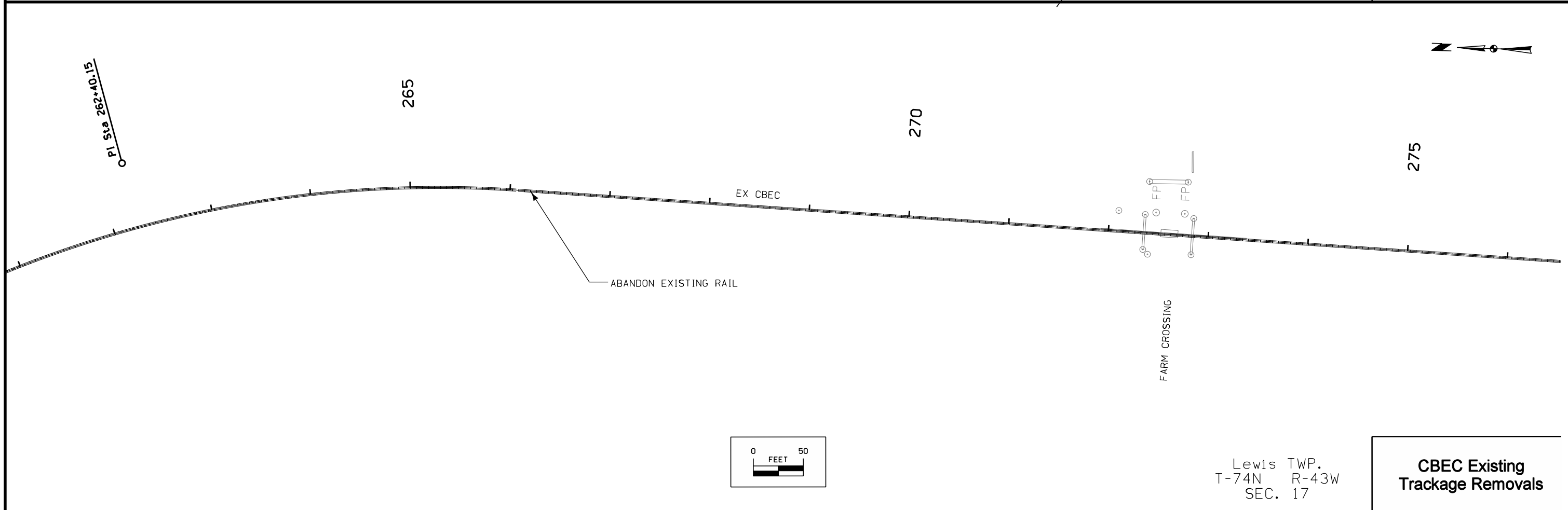
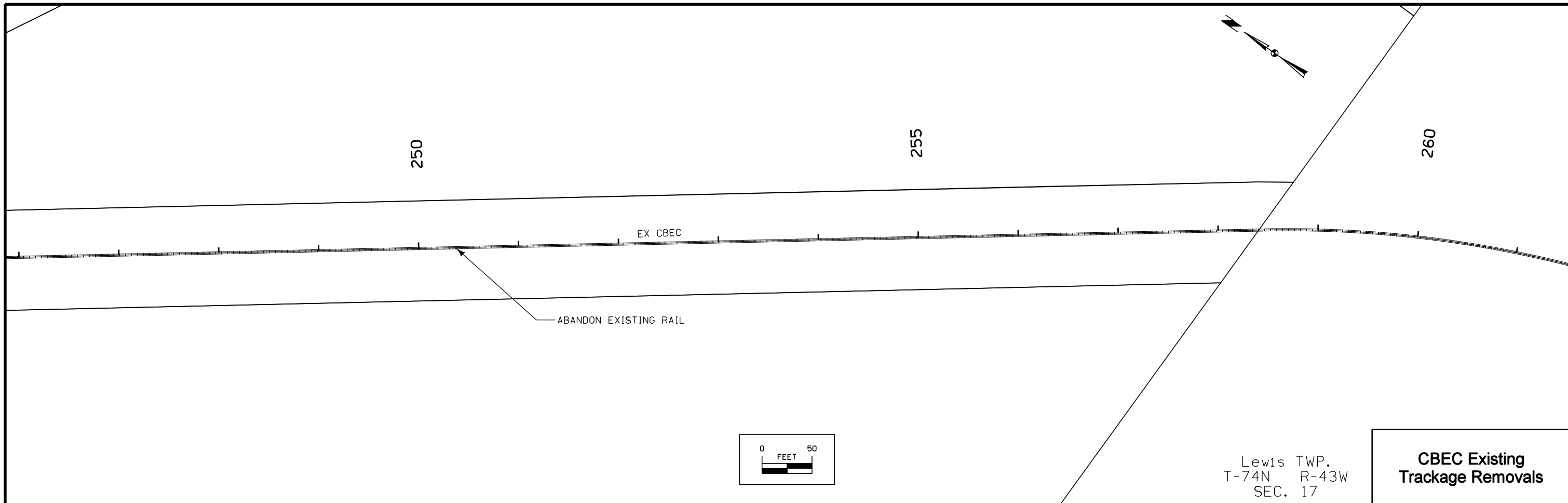
For CBEC Future 2nd Main Track Details Refer to Sheets No. D.29 - D.35

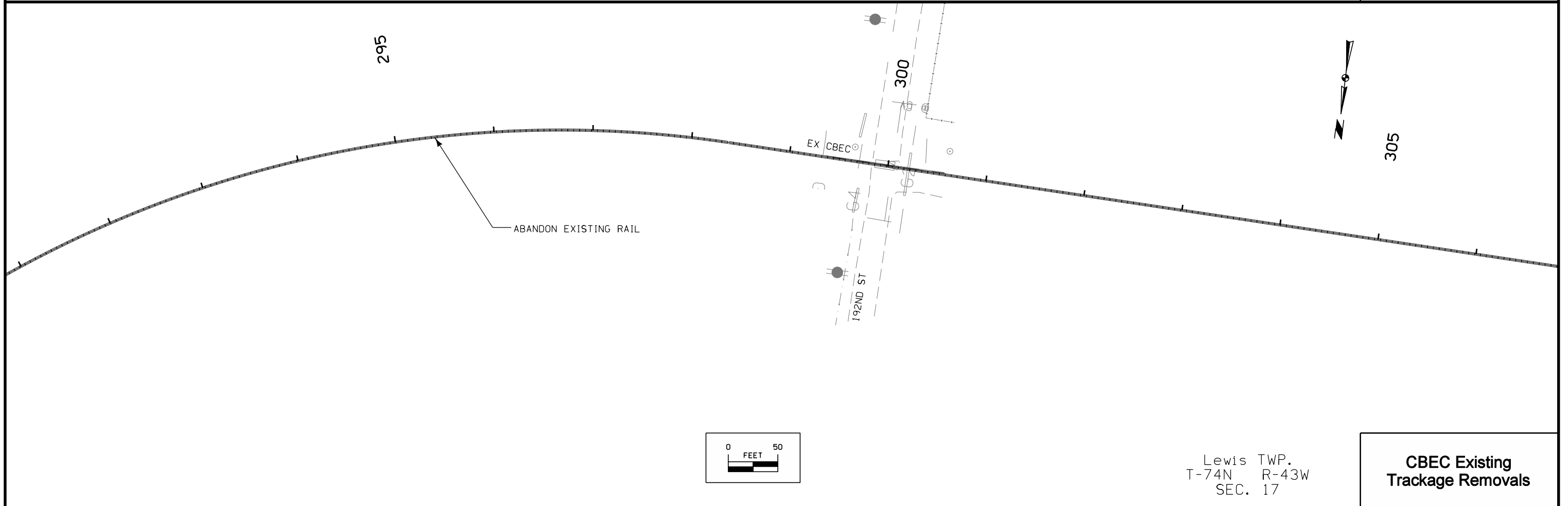
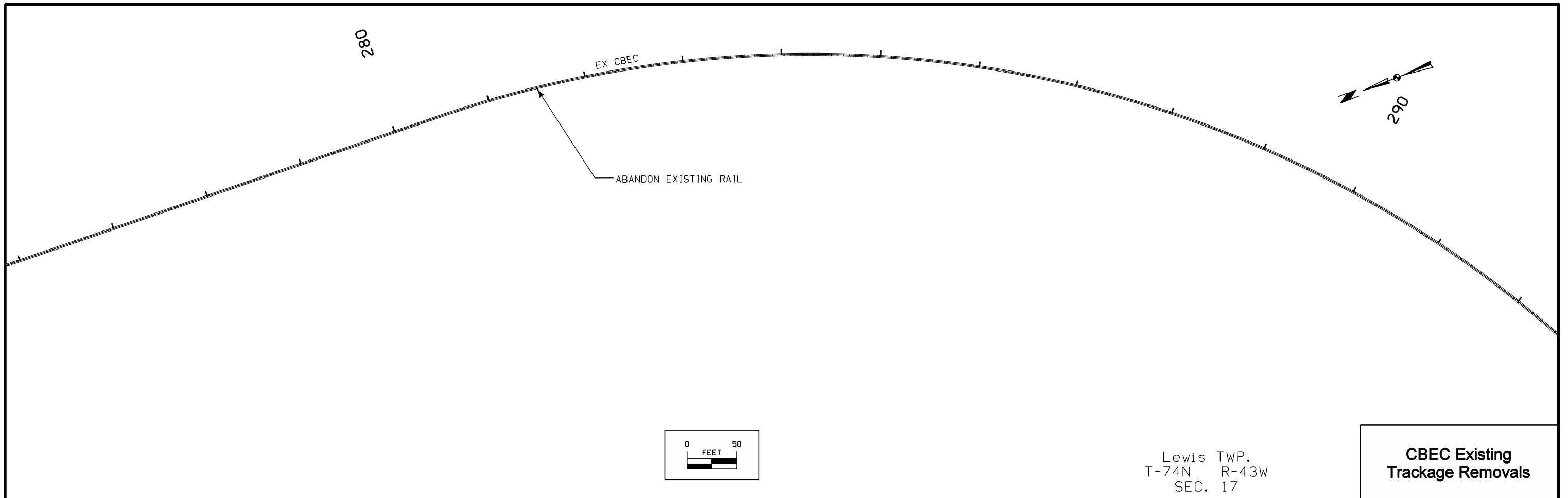
For BNSF Wye Track E Leg Details Refer to Sheets No. D.7 - D.9

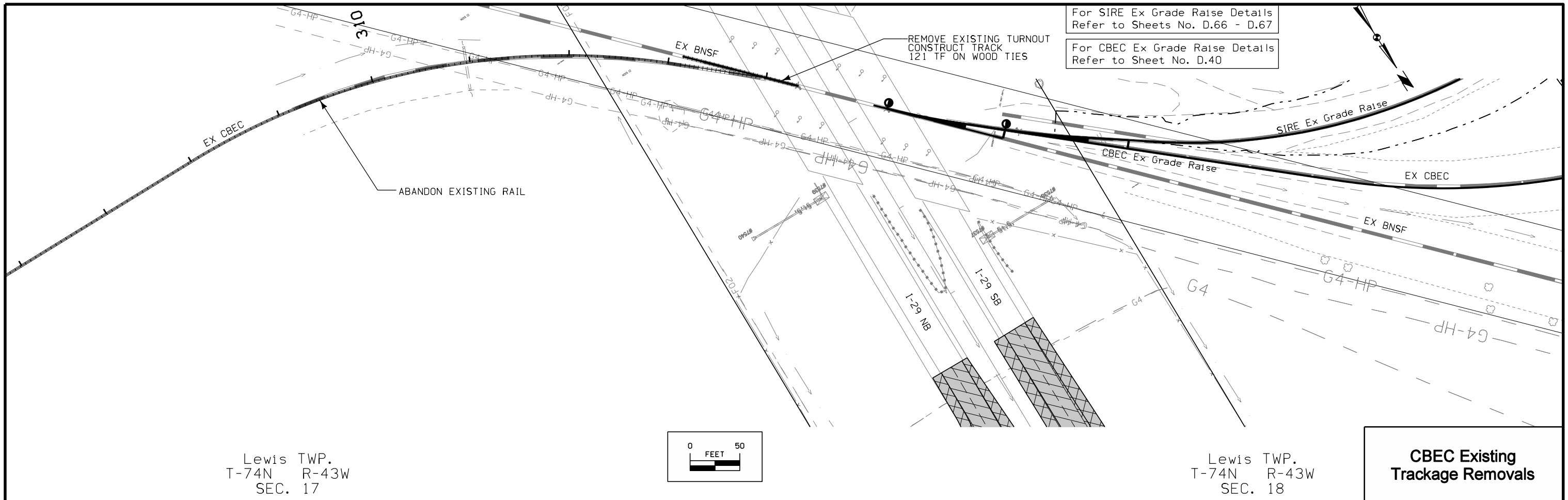
For BNSF S Line Seg Details Refer to Sheets No. D.1 - D.6











For IAIS Maintenance Track
Details Refer to Sheet No. D.57

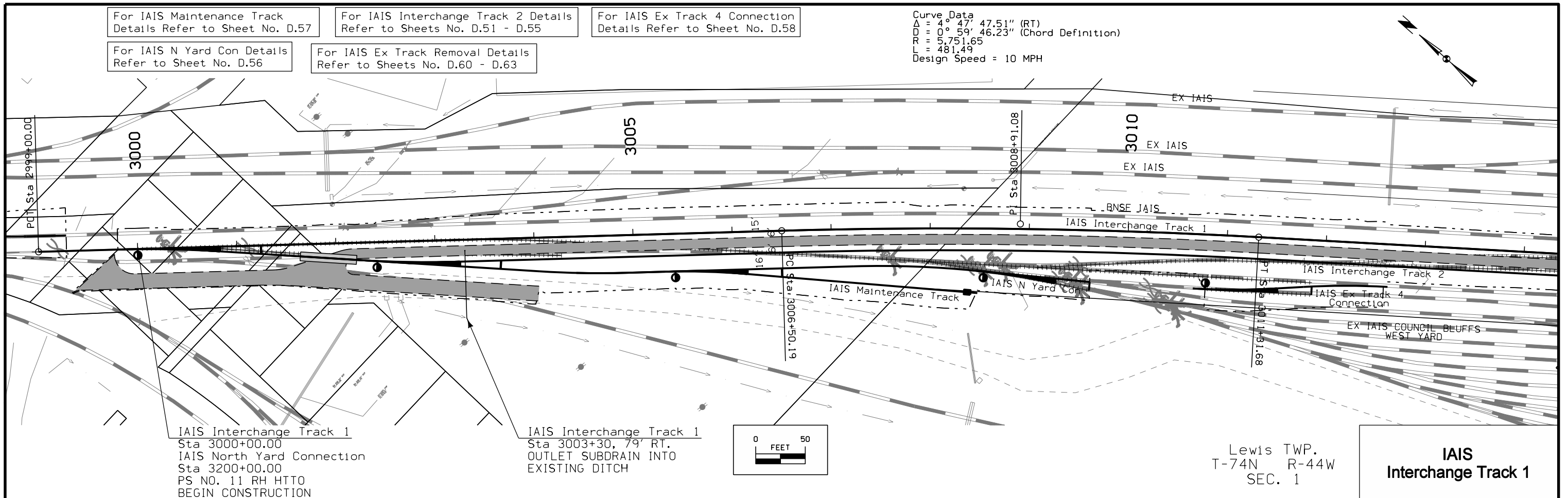
For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Ex Track 4 Connection
Details Refer to Sheet No. D.58

For IAIS N Yard Con Details
Refer to Sheet No. D.56

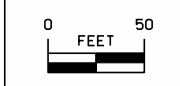
For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

Curve Data
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 $D = 0^{\circ} 59' 46.23''$ (Chord Definition)
 $R = 5,751.65$
 $L = 481.49$
Design Speed = 10 MPH



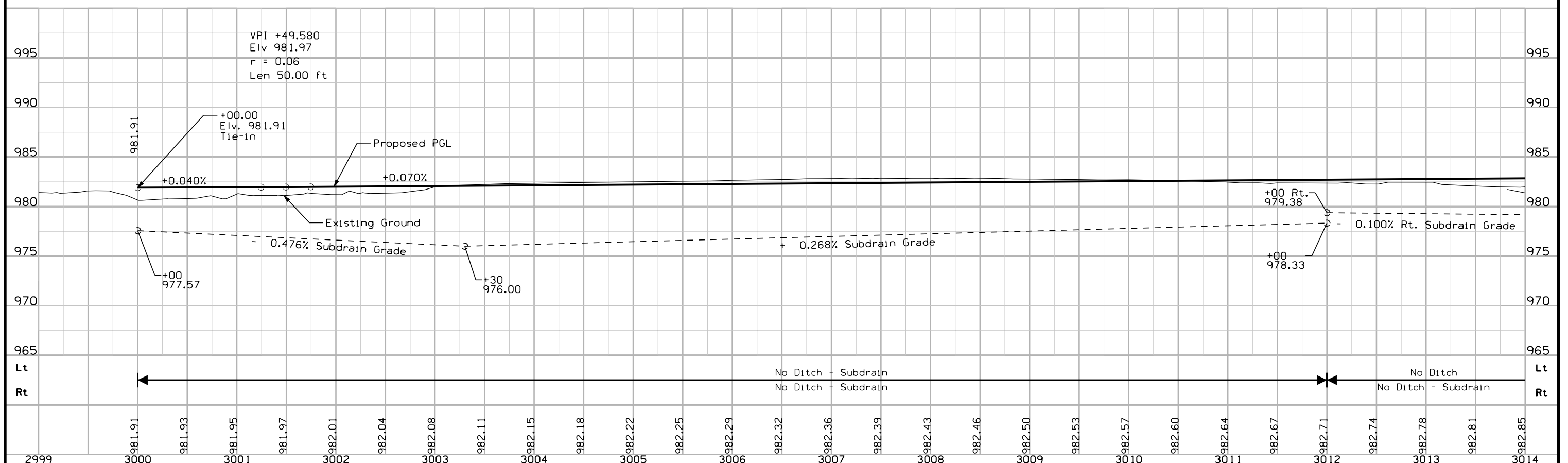
IAIS Interchange Track 1
Sta 3000+00.00
IAIS North Yard Connection
Sta 3200+00.00
PS NO. 11 RH HTTO
BEGIN CONSTRUCTION

IAIS Interchange Track 1
Sta 3003+30, 79' RT.
OUTLET SUBDRAIN INTO
EXISTING DITCH



Lewis TWP.
T-74N R-44W
SEC. 1

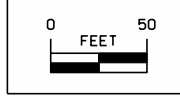
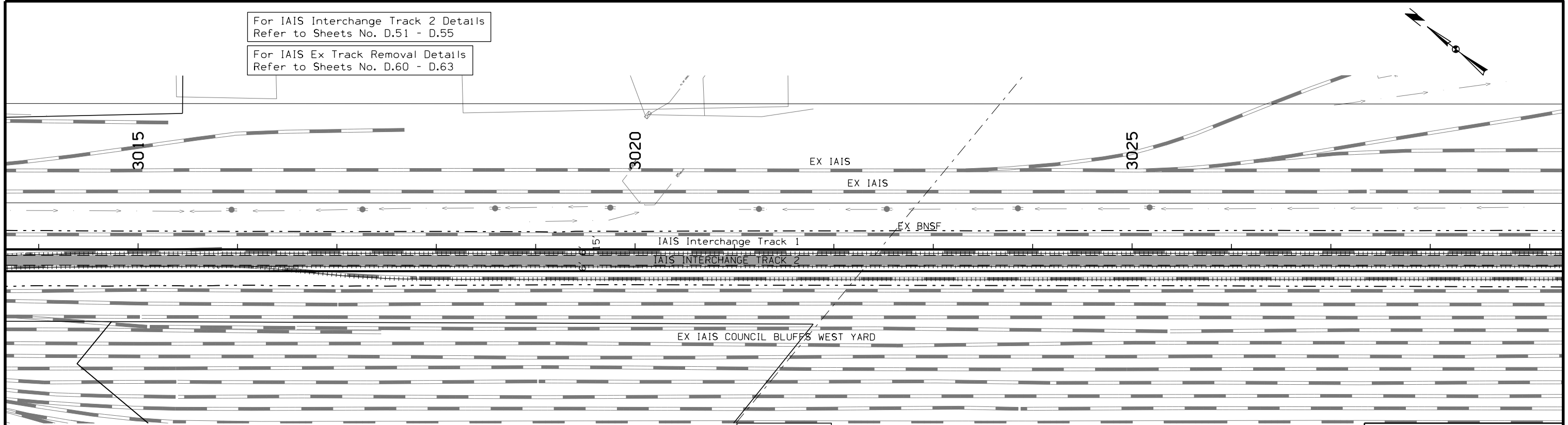
**IAIS
Interchange Track 1**



2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014													
981.91	981.93	981.95	981.97	982.01	982.04	982.08	982.11	982.15	982.18	982.22	982.25	982.29	982.32	982.36	982.39	982.43	982.46	982.50	982.53	982.57	982.60	982.64	982.67	982.71	982.74	982.78	982.81	982.85

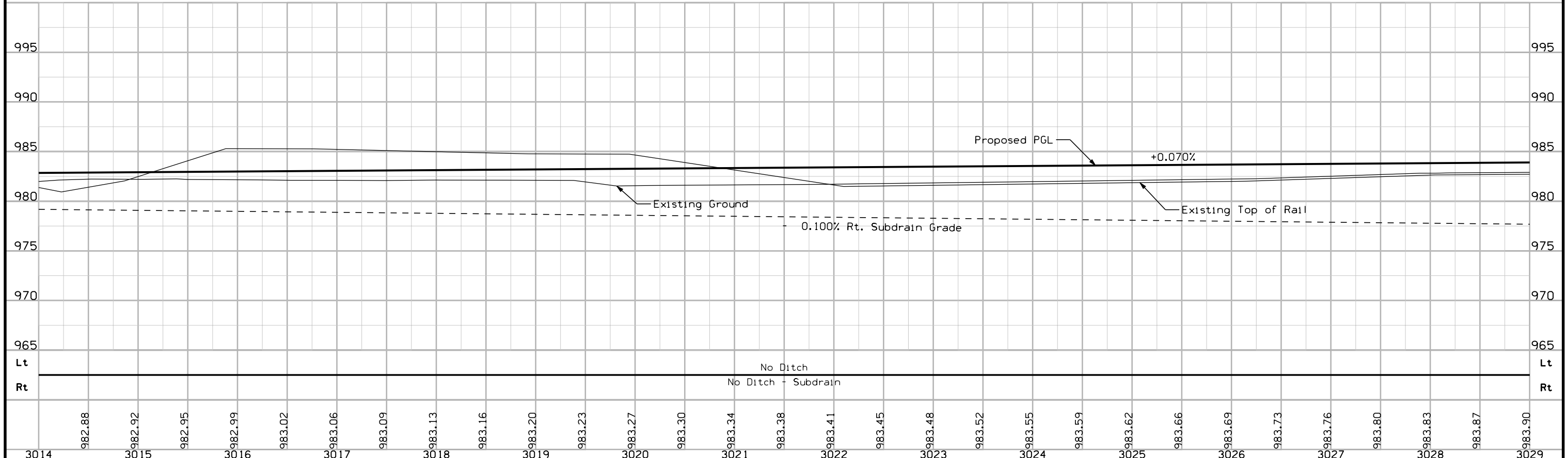
For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63



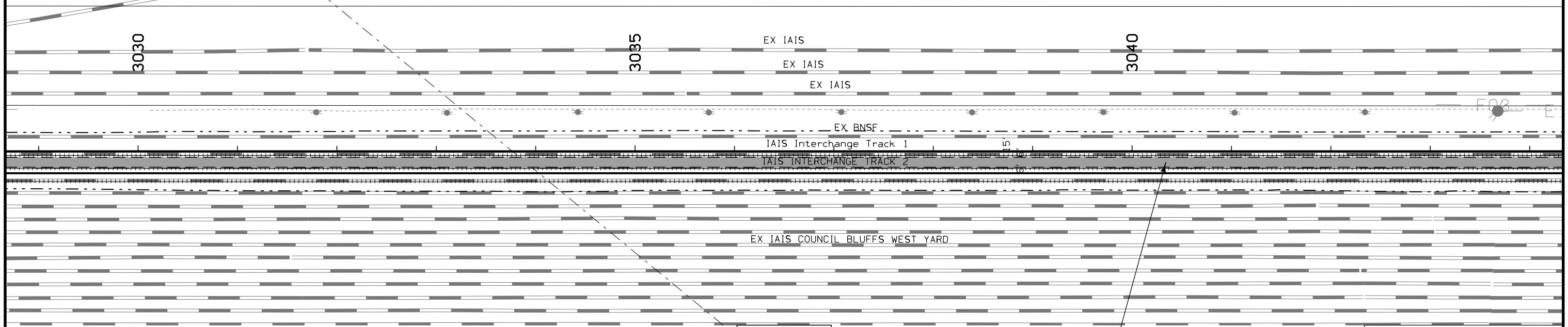
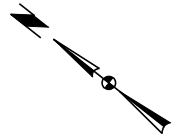
Lewis TWP.
T-74N R-44W
SEC. 1

**IAIS
Interchange Track 1**



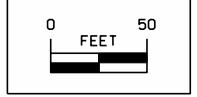
For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63



Lewis TWP.
T-74N R-43W
SEC. 1

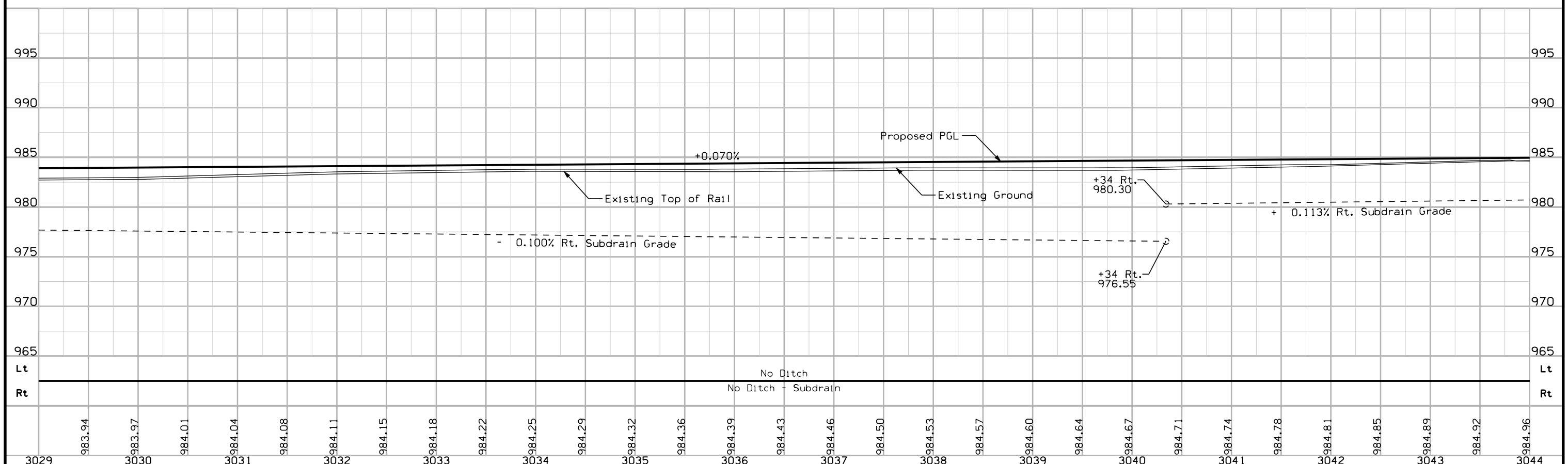
Lewis TWP.
T-74N R-43W
SEC. 6



IAIS Interchange Track 1
Sta 3040+34, 11' RT.
OUTLET SUBDRAIN INTO
FUTURE DESIGN 9 CULVERT

Lewis TWP.
T-74N R-43W
SEC. 6

**IAIS
Interchange Track 1**



3029	983.94	3030	983.97	3031	984.01	3032	984.04	3033	984.08	3034	984.11	3035	984.15	3036	984.18	3037	984.22	3038	984.25	3039	984.29	3040	984.32	3041	984.36	3042	984.39	3043	984.43	3044	984.46
------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------

For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

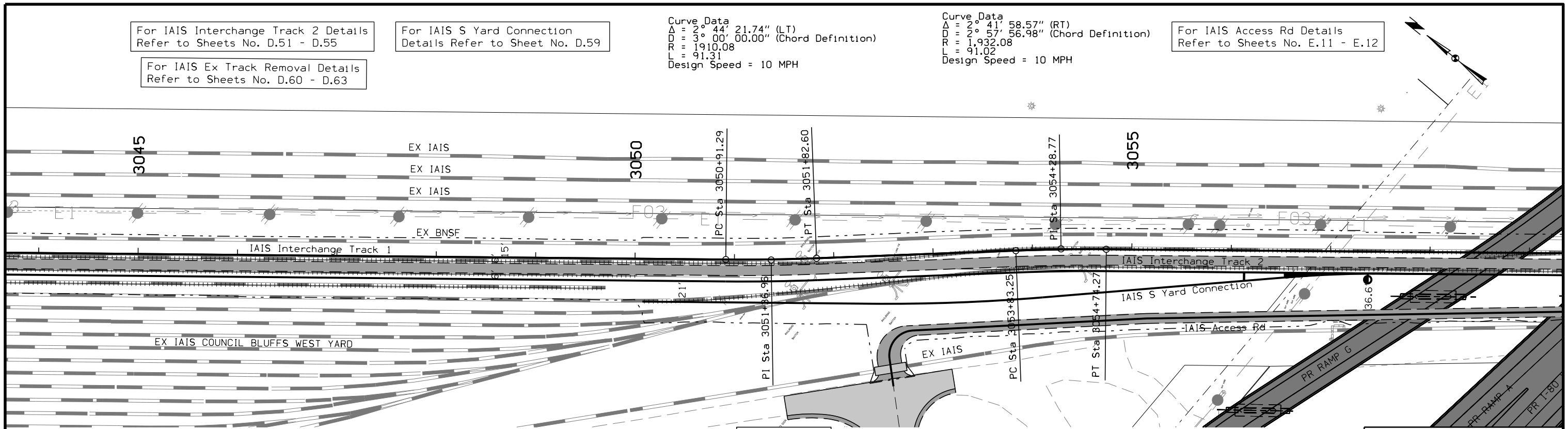
For IAIS S Yard Connection
Details Refer to Sheet No. D.59

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

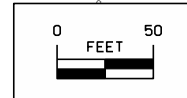
Curve Data
 $\Delta = 2^{\circ} 44' 21.74''$ (LT)
 $D = 3^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 1910.08$
 $L = 91.31$
 Design Speed = 10 MPH

Curve Data
 $\Delta = 2^{\circ} 41' 58.57''$ (RT)
 $D = 2^{\circ} 57' 56.98''$ (Chord Definition)
 $R = 1,932.08$
 $L = 91.02$
 Design Speed = 10 MPH

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12

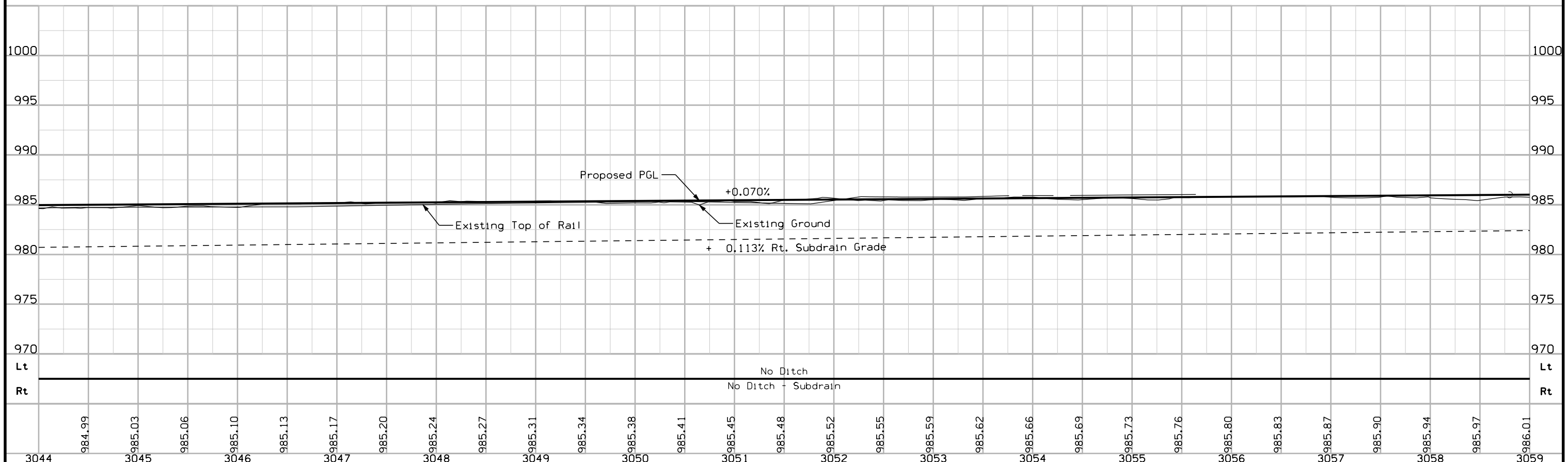


Lewis TWP.
T-74N R-43W
SEC. 6



Lewis TWP.
T-74N R-43W
SEC. 7

**IAIS
Interchange Track 1**



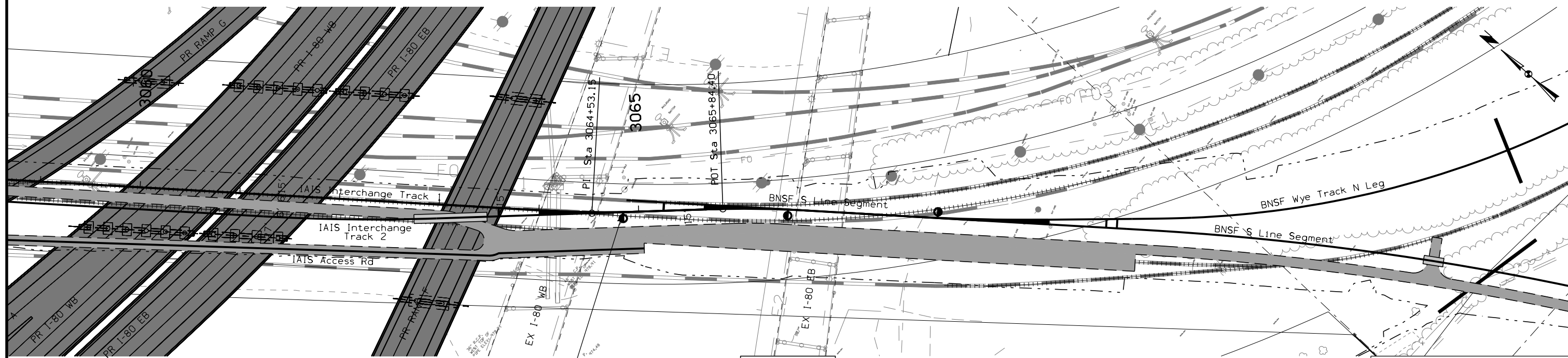
For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

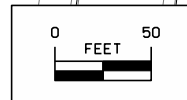
For BNSF Wye Track N Leg Details
Refer to Sheets No. D.10 - D.11

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12

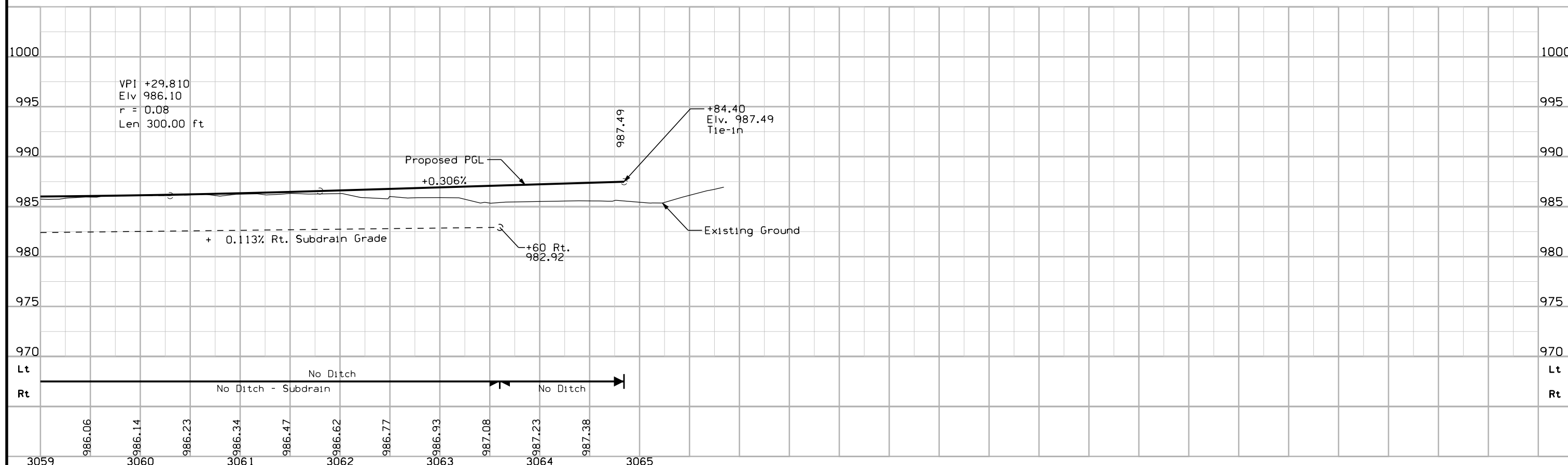


IAIS Interchange Track 1 Sta 3064+84.40
IAIS Interchange Track 2 Sta 3162+41.93
PS NO. 11 RH HTTO
CONSTRUCT TURNOUT PAD
END CONSTRUCTION



Lewis TWP.
T-74N R-43W
SEC. 7

**IAIS
Interchange Track 1**



For IAIS Maintenance Track
Details Refer to Sheet No. D.57

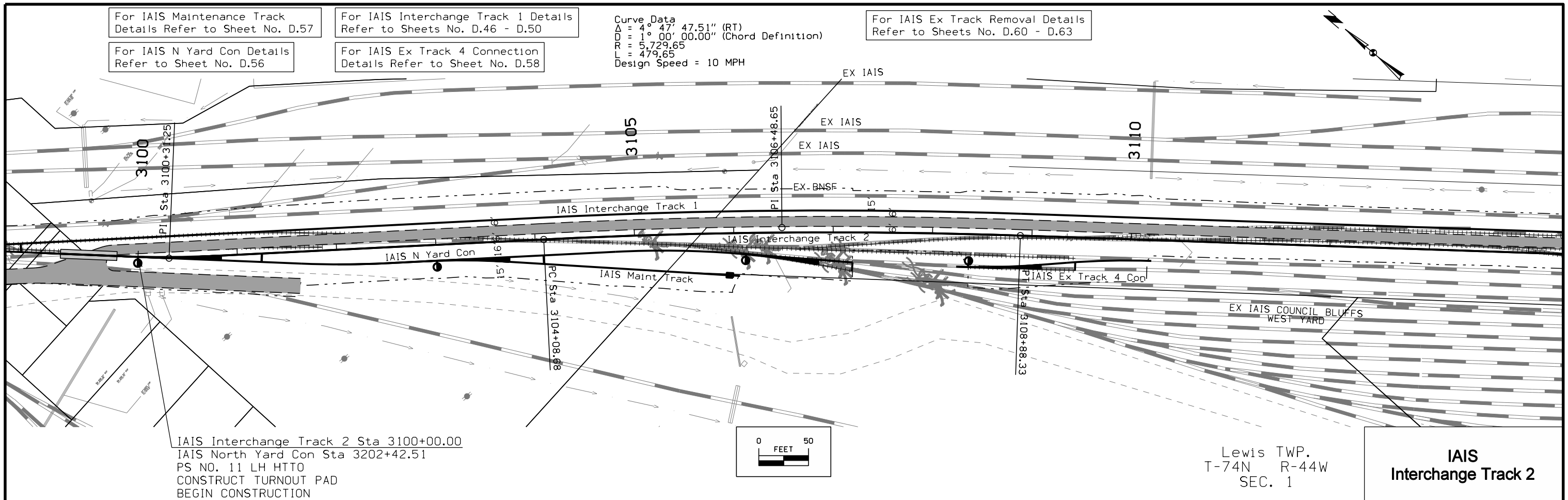
For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

Curve Data
PC = 4° 47' 47.51" (RT)
PT = 1° 00' 00.00" (Chord Definition)
LC = 5,729.65
L = 479.65
Design Speed = 10 MPH

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

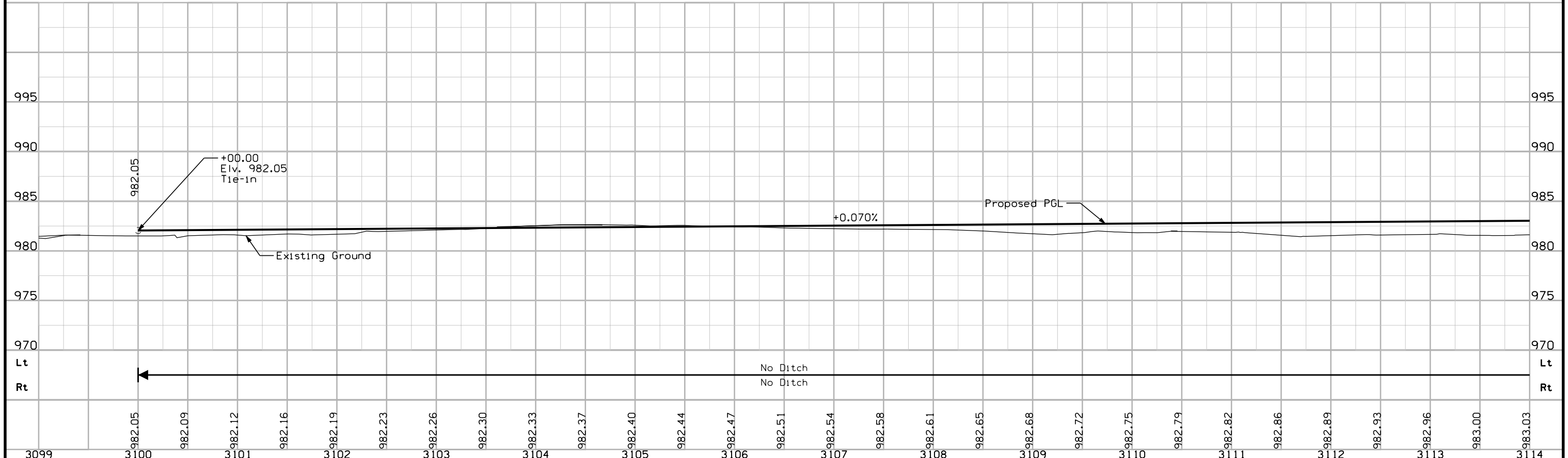
For IAIS N Yard Con Details
Refer to Sheet No. D.56

For IAIS Ex Track 4 Connection
Details Refer to Sheet No. D.58



Lewis TWP.
T-74N R-44W
SEC. 1

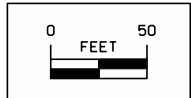
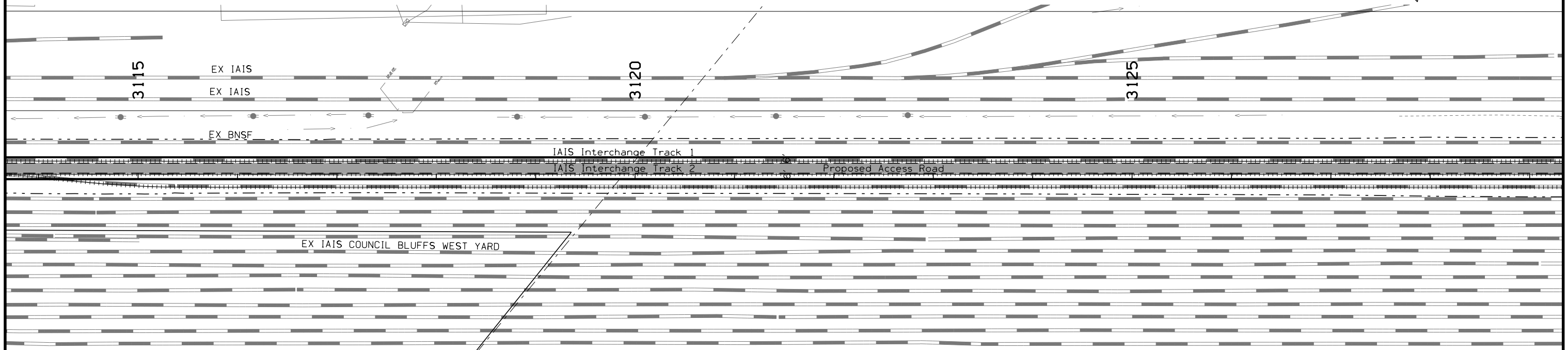
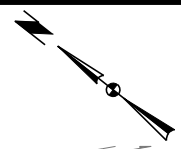
**IAIS
Interchange Track 2**



3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114
982.05	982.09	982.12	982.16	982.19	982.23	982.26	982.30	982.33	982.37	982.40	982.44	982.47	982.51	982.54	982.58

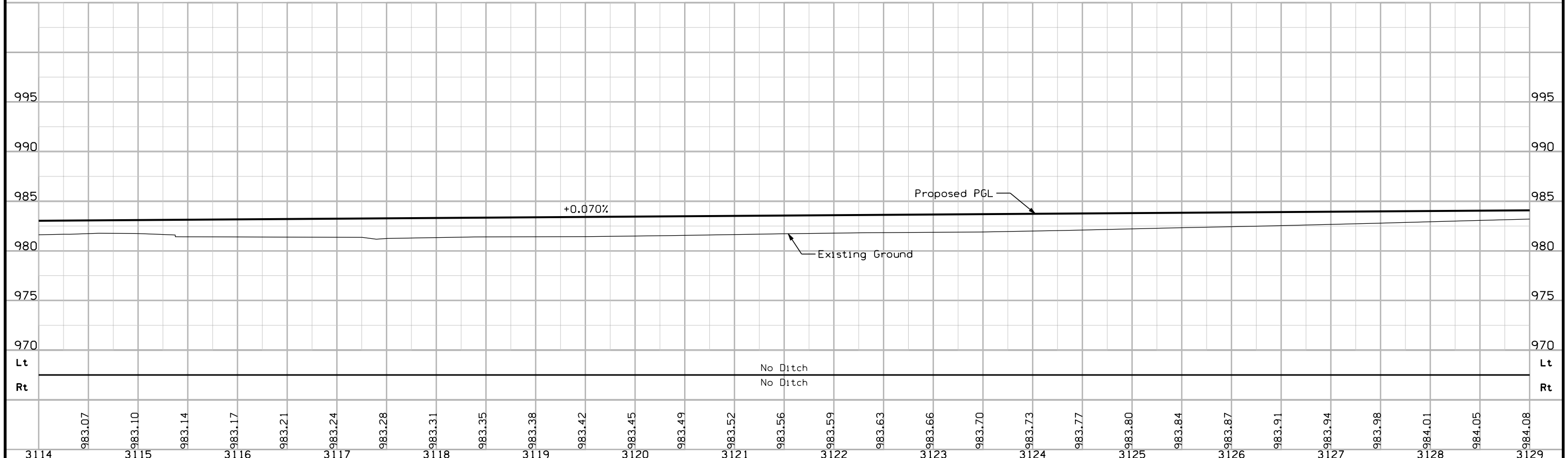
For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63



Lewis TWP.
T-74N R-44W
SEC. 1

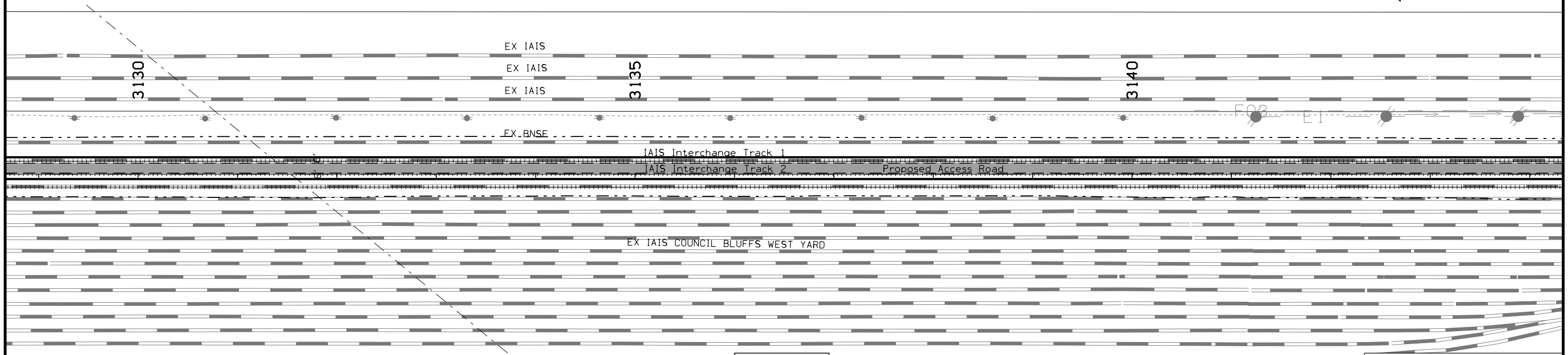
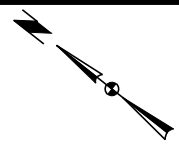
**IAIS
Interchange Track 2**



3114	983.07	3115	983.10	3116	983.14	3117	983.17	3118	983.21	3119	983.24	3120	983.28	3121	983.31	3122	983.35	3123	983.38	3124	983.42	3125	983.45	3126	983.49	3127	983.52	3128	983.56	3129	983.59	983.63	983.66	983.70	983.73	983.77	983.80	983.84	983.87	983.91	983.94	983.98	984.01	984.05	984.08
------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

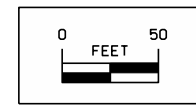
For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63



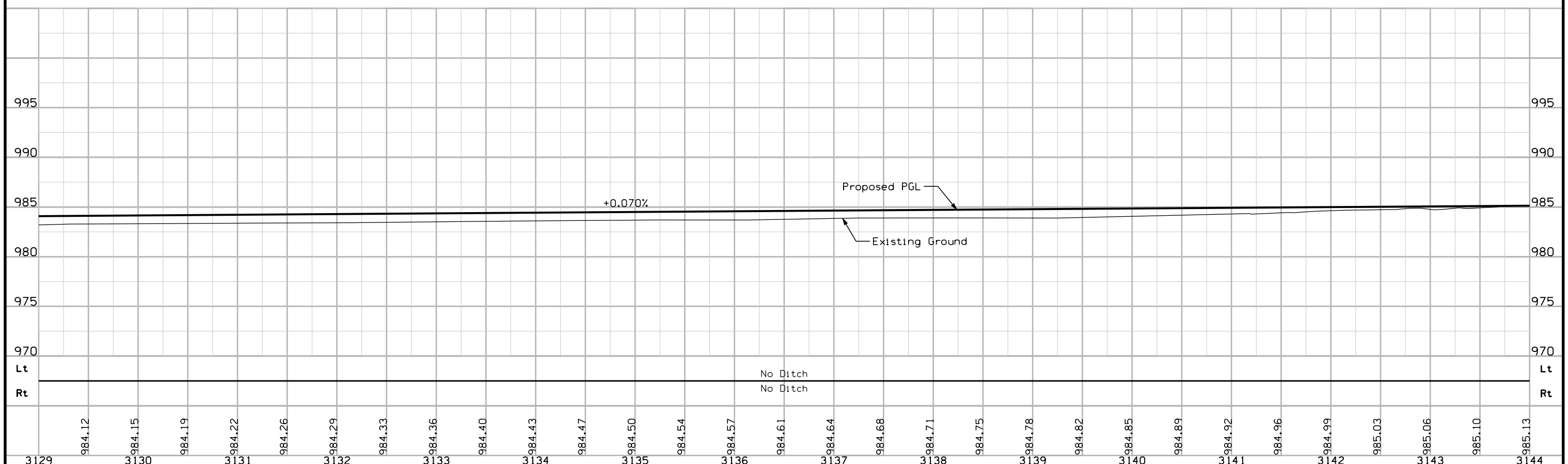
Lewis TWP.
T-74N R-43W
SEC. 1

Lewis TWP.
T-74N R-43W
SEC. 6



Lewis TWP.
T-74N R-43W
SEC. 6

**IAIS
Interchange Track 2**



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\HDR	POTTAWATTAMIE COUNTY	PROJECT NUMBER	IM-029-2(55)49--13-78	SHEET NUMBER	D.53
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For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

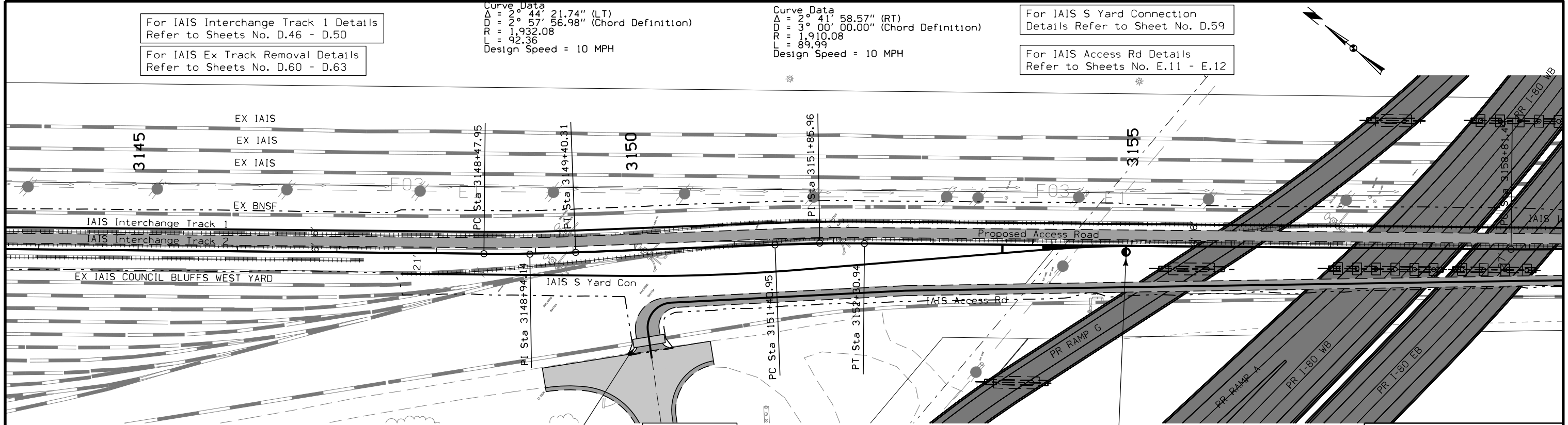
For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

Curve Data
 $\Delta = 2^\circ 44' 21.74''$ (LT)
 $D = 2^\circ 57' 56.98''$ (Chord Definition)
 $RR = 1,932.08$
 $L = 92.36$
 Design Speed = 10 MPH

Curve Data
 $\Delta = 2^\circ 41' 58.57''$ (RT)
 $D = 3^\circ 00' 00.00''$ (Chord Definition)
 $RR = 1,910.08$
 $L = 89.99$
 Design Speed = 10 MPH

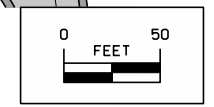
For IAIS S Yard Connection
Details Refer to Sheet No. D.59

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12



Lewis TWP.
T-74N R-43W
SEC. 6

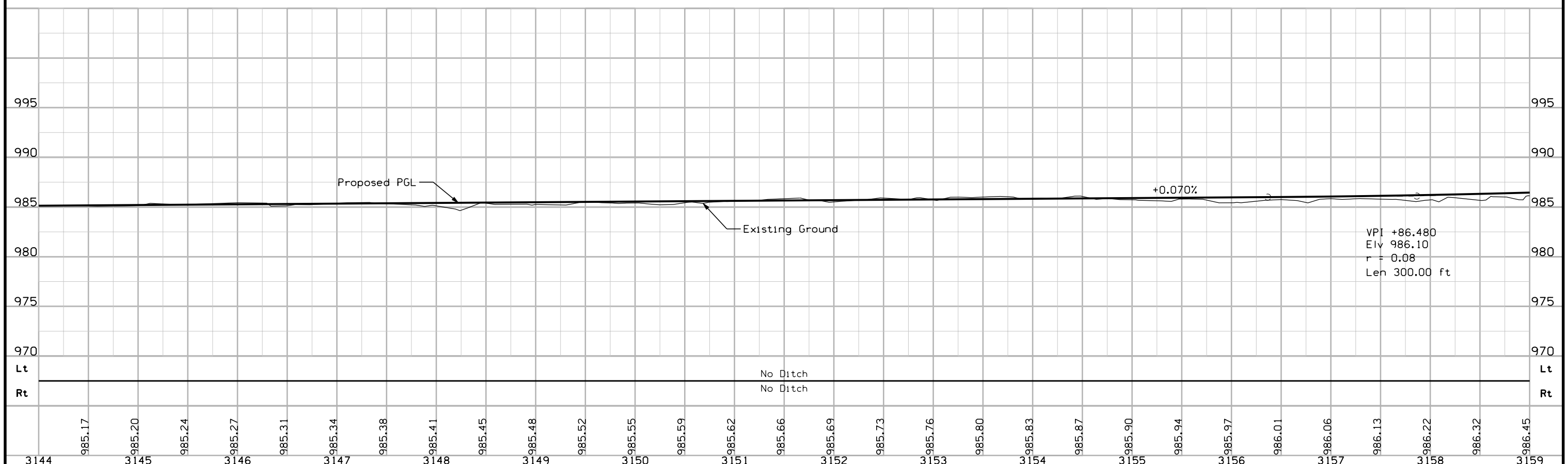
IAIS Interchange Track 2 Sta 3149+95.00
INSTALL 32'-0" CONCRETE CROSSING
PER STA DWG 0304G, 200100 - 200102
ON 10' WOOD TIES.



IAIS Interchange Track 2 Sta 3154+94.19
IAIS South Yard Con Sta 3507+30.91
PS NO. 11 LH HTTO
CONSTRUCT TURNOUT PAD

Lewis TWP.
T-74N R-43W
SEC. 7

IAIS Interchange Track 2



Curve Data
 $\Delta = 5^{\circ} 12' 18.00''$ (LT)
 $D = 3^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 1,910.08$
 $L = 173.50$
 Design Speed = 10 MPH

IAIS Interchange Track 2 Sta 3160+68.82
 INSTALL 74'-0" CONCRETE CROSSING
 PER STA DWG 0304G, 200100 - 200102
 ON 10' WOOD TIES.

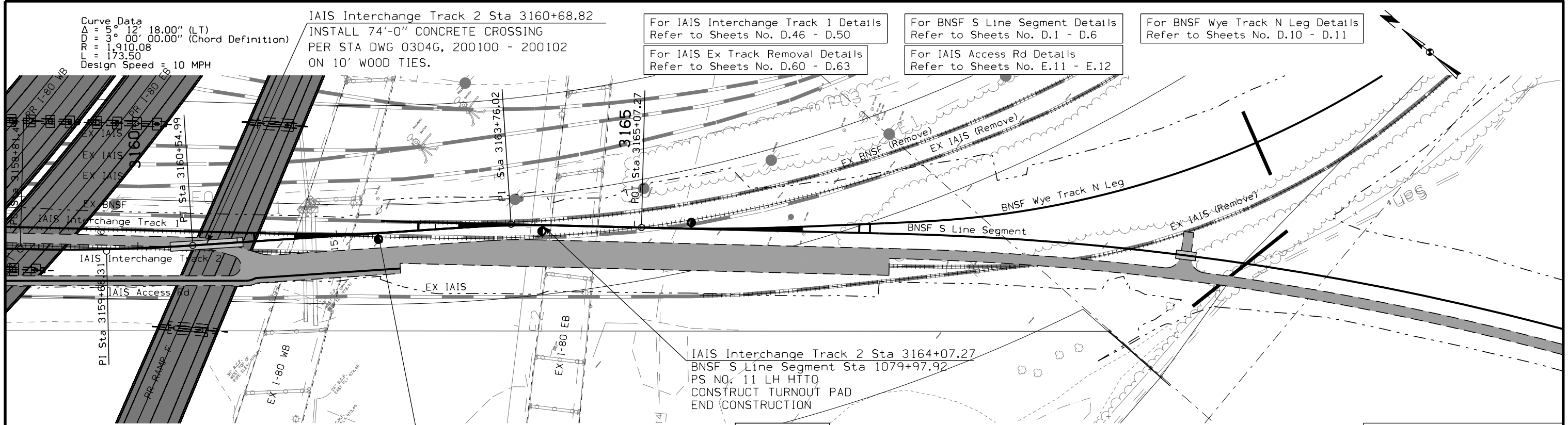
For IAIS Interchange Track 1 Details
 Refer to Sheets No. D.46 - D.50

For BNSF S Line Segment Details
 Refer to Sheets No. D.1 - D.6

For BNSF Wye Track N Leg Details
 Refer to Sheets No. D.10 - D.11

For IAIS Ex Track Removal Details
 Refer to Sheets No. D.60 - D.63

For IAIS Access Rd Details
 Refer to Sheets No. E.11 - E.12

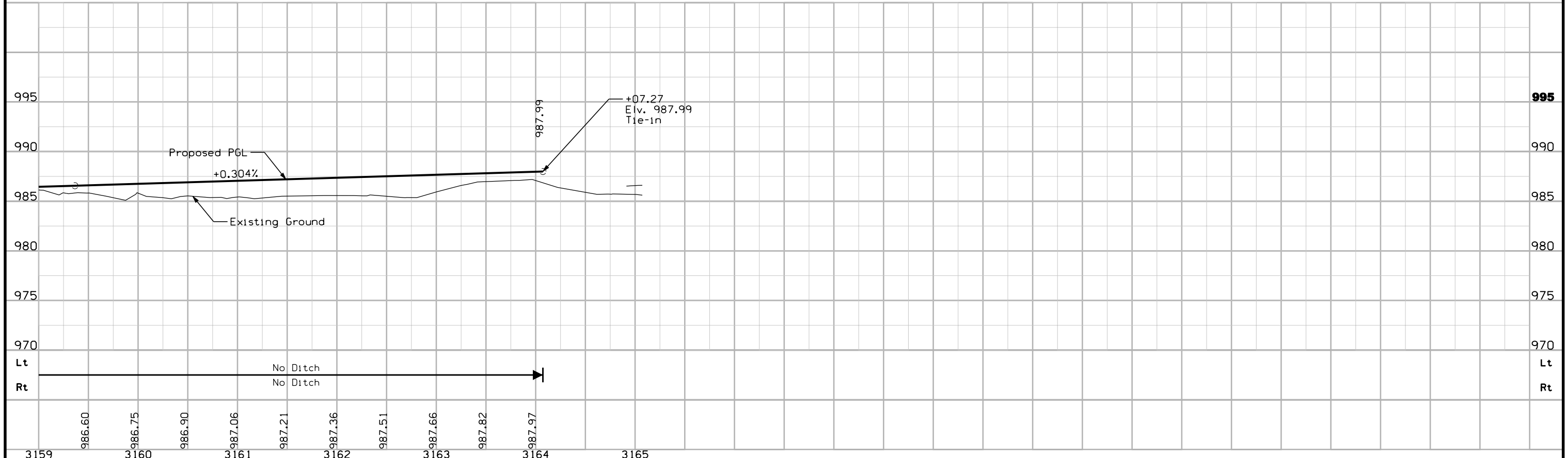


IAIS Interchange Track 2 Sta 3162+41.93
 IAIS Interchange Track 1 Sta 3064+84.40
 PS NO. 11 RH HTTO
 CONSTRUCT TURNOUT PAD

IAIS Interchange Track 2 Sta 3164+07.27
 BNSF S Line Segment Sta 1079+97.92
 PS NO. 11 LH HTTO
 CONSTRUCT TURNOUT PAD
 END CONSTRUCTION

Lewis TWP.
 T-74N R-43W
 SEC. 7

IAIS Interchange Track 2



IAIS N Yard Con Sta 3201+93.33
 INSTALL 74'-0" CONCRETE CROSSING
 PER STA DWG 0304G, 200100 - 200102
 ON 10' WOOD TIES.

For IAIS Maintenance Track
 Details Refer to Sheet No. D.57

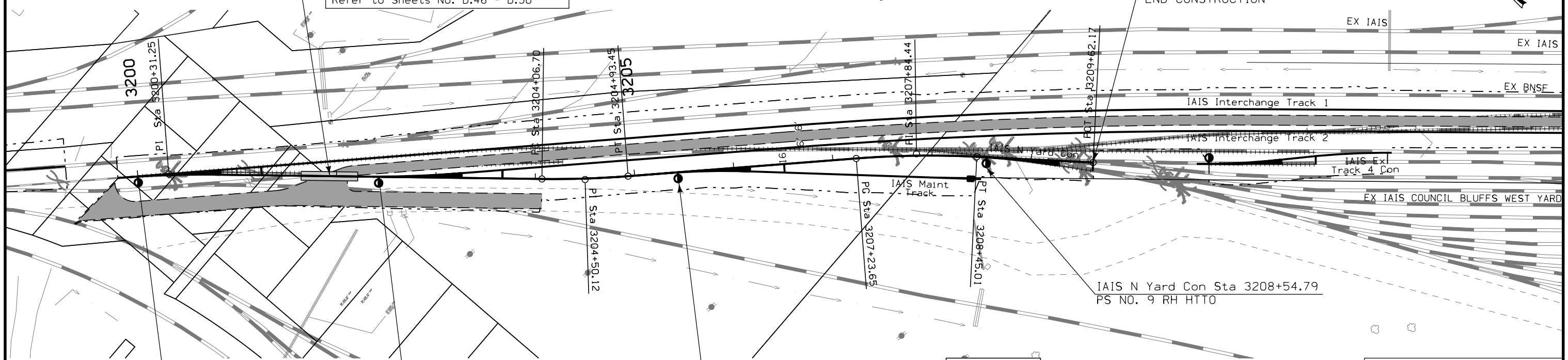
For IAIS Interchange Track 1 Details
 Refer to Sheets No. D.46 - D.50

Curve Data
 $\Delta = 5^{\circ} 12' 18.00''$ (LT)
 $D = 6^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $L = 86.75$
 Design Speed = 10 MPH

Curve Data
 $\Delta = 7^{\circ} 16' 54.47''$ (RT)
 $D = 6^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $L = 121.36$
 Design Speed = 10 MPH

For IAIS Ex Track 4 Connection
 Details Refer to Sheet No. D.58

IAIS N Yard Con Sta 3209+62.17
 END CONSTRUCTION



For IAIS Ex Track
 Removal Details
 Refer to Sheets
 No. D.60 - D.63

IAIS N Yard Con Sta 3200+00.00
 IAIS Interchange Track 2
 Sta 3099+00.00
 PS NO.11 RH HTTO
 BEGIN CONSTRUCTION

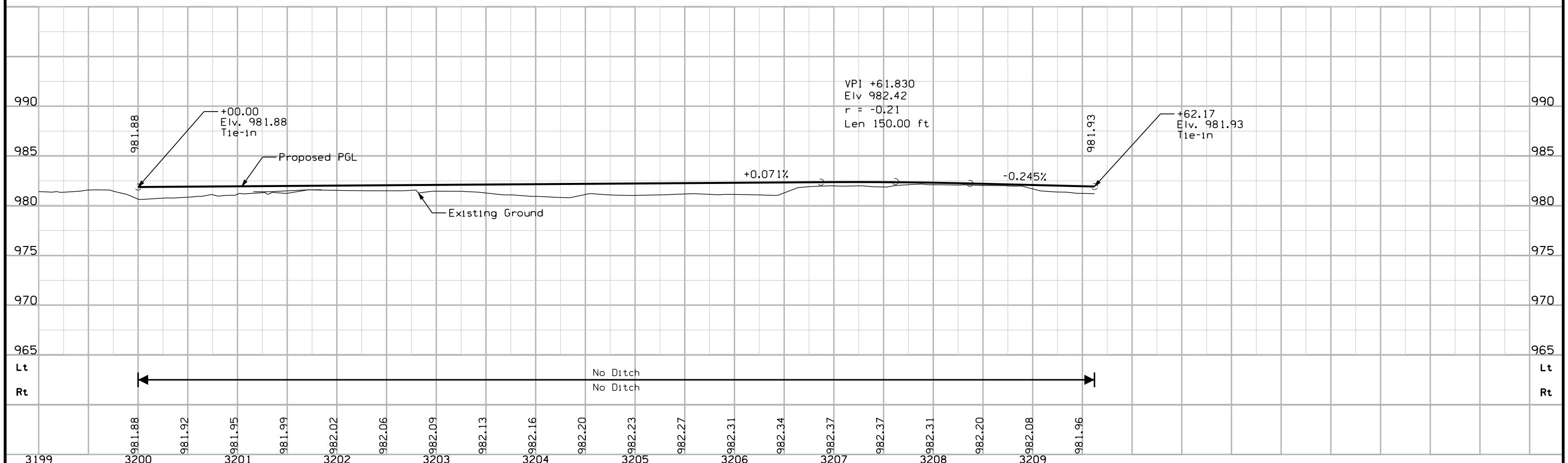
IAIS N Yard Con Sta 3202+42.51
 IAIS Interchange Track 2
 Sta 3100+00.00
 PS NO. 11 LH HTTO

IAIS N Yard Con Sta 3205+43.45
 IAIS Maint Track Sta 3300+00.00
 PS NO. 9 RH HTTO

For IAIS Interchange
 Track 2 Details Refer
 to Sheets No. D.51 -
 D.55

Lewis TWP.
 T-74N R-44W
 SEC. 1

**IAIS
 North Yard Connection**



Curve Data
 $\Delta = 3^{\circ} 00' 00.00''$ (LT)
 $D = 6^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 955.37$
 $L = 50.00$
 Design Speed = 10 MPH

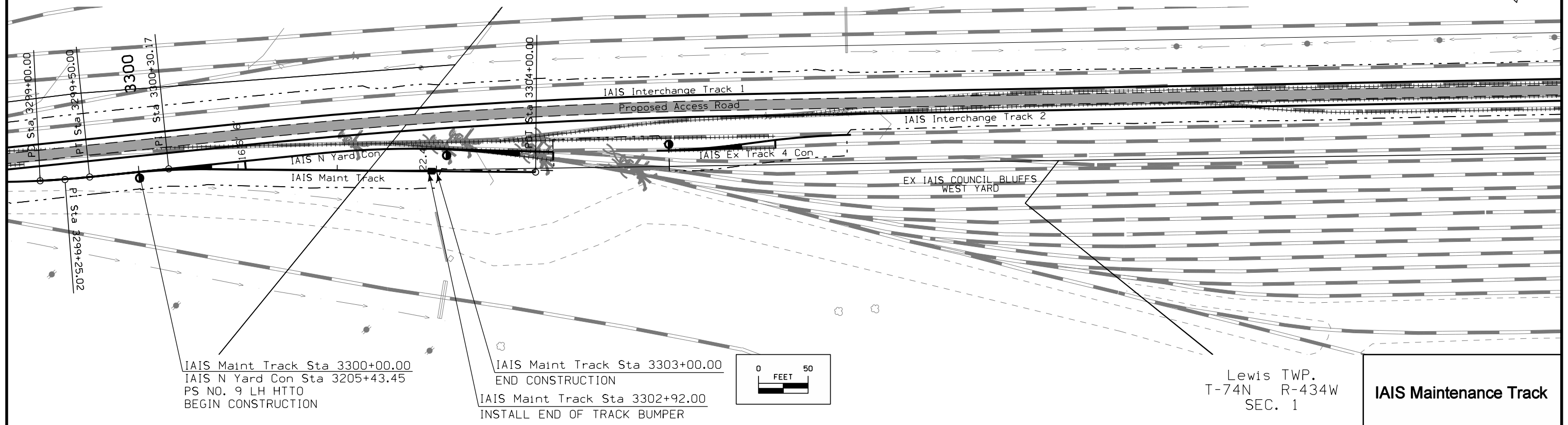
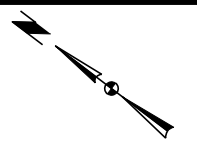
For IAIS N Yard Con Details
 Refer to Sheet No. D.56

For IAIS Interchange Track 2 Details
 Refer to Sheets No. D.51 - D.55

For IAIS Interchange Track 1 Details
 Refer to Sheets No. D.46 - D.50

For IAIS Ex Track 4 Connection
 Details Refer to Sheet No. D.58

For IAIS Ex Track Removal Details
 Refer to Sheets No. D.60 - D.63

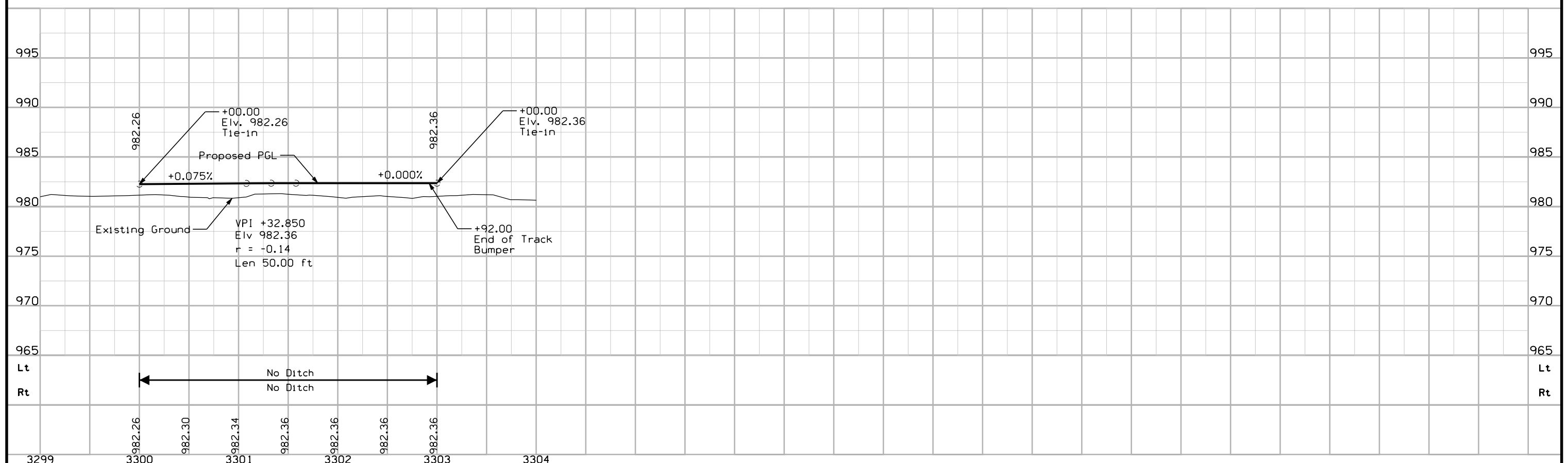


IAIS Maint Track Sta 3300+00.00
 IAIS N Yard Con Sta 3205+43.45
 PS NO. 9 LH HTTO
 BEGIN CONSTRUCTION

IAIS Maint Track Sta 3303+00.00
 END CONSTRUCTION
 IAIS Maint Track Sta 3302+92.00
 INSTALL END OF TRACK BUMPER

Lewis TWP.
 T-74N R-434W
 SEC. 1

IAIS Maintenance Track

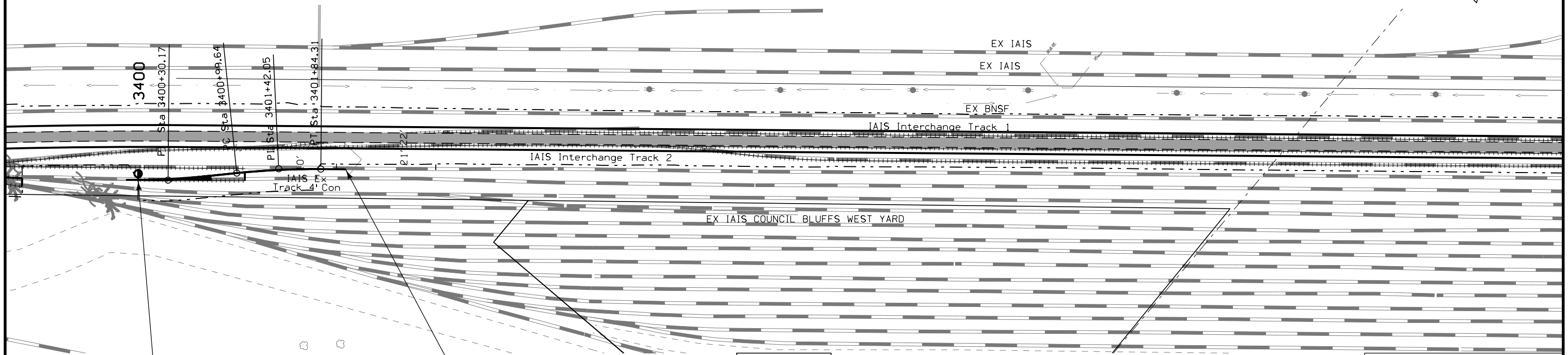
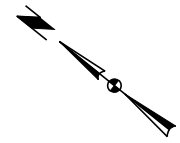


Curve Data
 $\Delta = 6^{\circ} 21' 01.76''$ (RT)
 $D = 9^{\circ} 00' 00.00''$ (Chord Definition)
 $R = 637.27$
 $L = 84.67$
 Design Speed = 10 MPH

For IAIS Interchange Track 1 Details
 Refer to Sheets No. D.46 - D.50

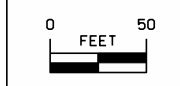
For IAIS Interchange Track 2 Details
 Refer to Sheets No. D.51 - D.55

For IAIS Ex Track Removal Details
 Refer to Sheets No. D.60 - D.63



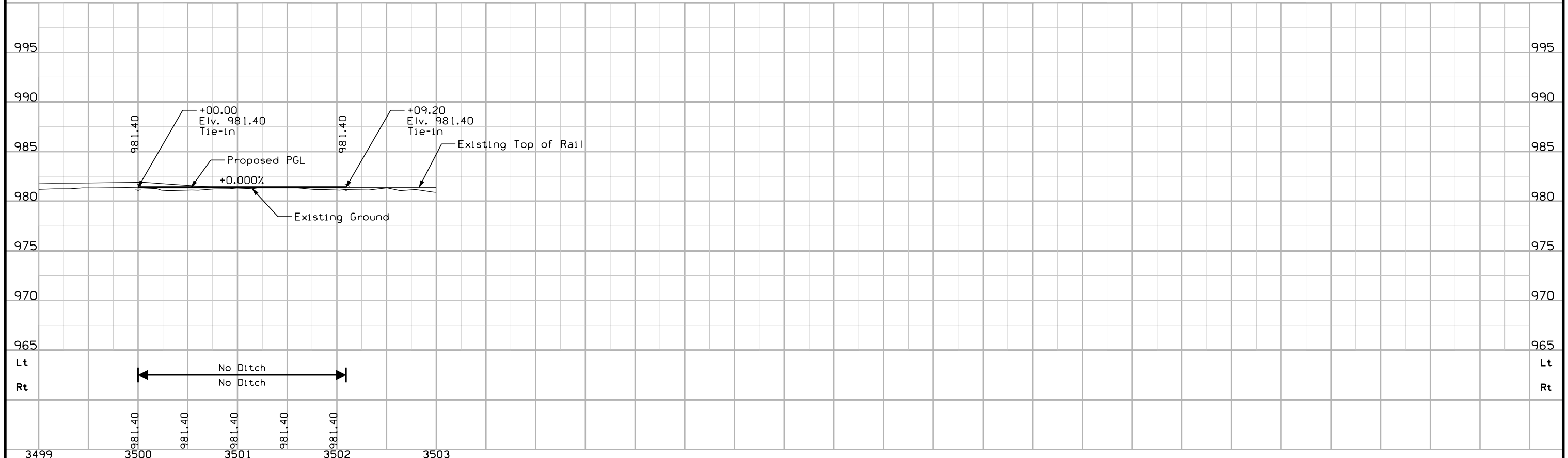
EX IAIS West Yard Track 5
 IAIS Ex Track 4 Con Sta 3400+00.00
 PS NO. 9 LH HTTO
 BEGIN CONSTRUCTION

IAIS Ex Track 4 Con Sta 3402+09.20
 END CONSTRUCTION



Lewis TWP.
 T-74N R-44W
 SEC. 1

**IAIS Existing
 Track 4 Connection**



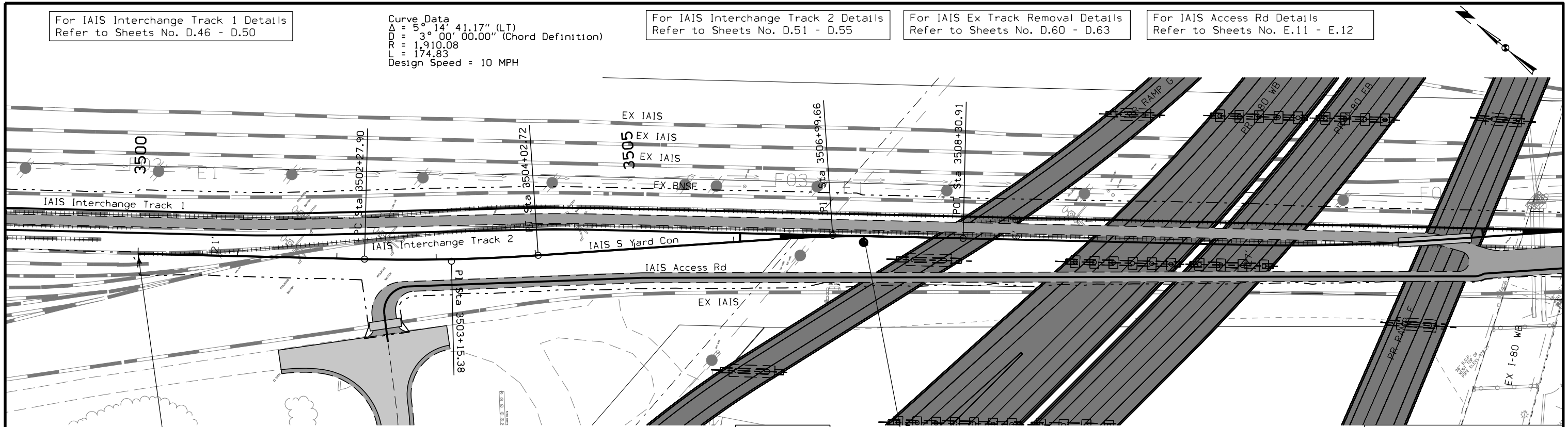
For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

Curve Data
 $\Delta = 5^{\circ}14'41.17''$ (LT)
 $CD = 3^{\circ}00'00.00''$ (Chord Definition)
 $R = 1,910.08$
 $L = 174.83$
 Design Speed = 10 MPH

For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12

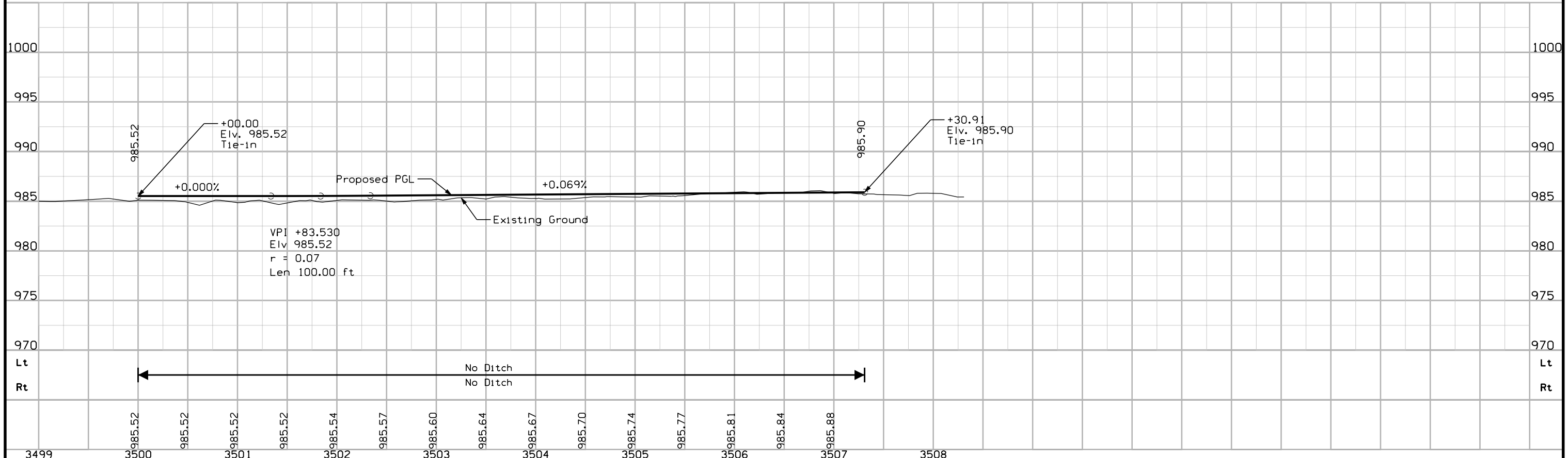


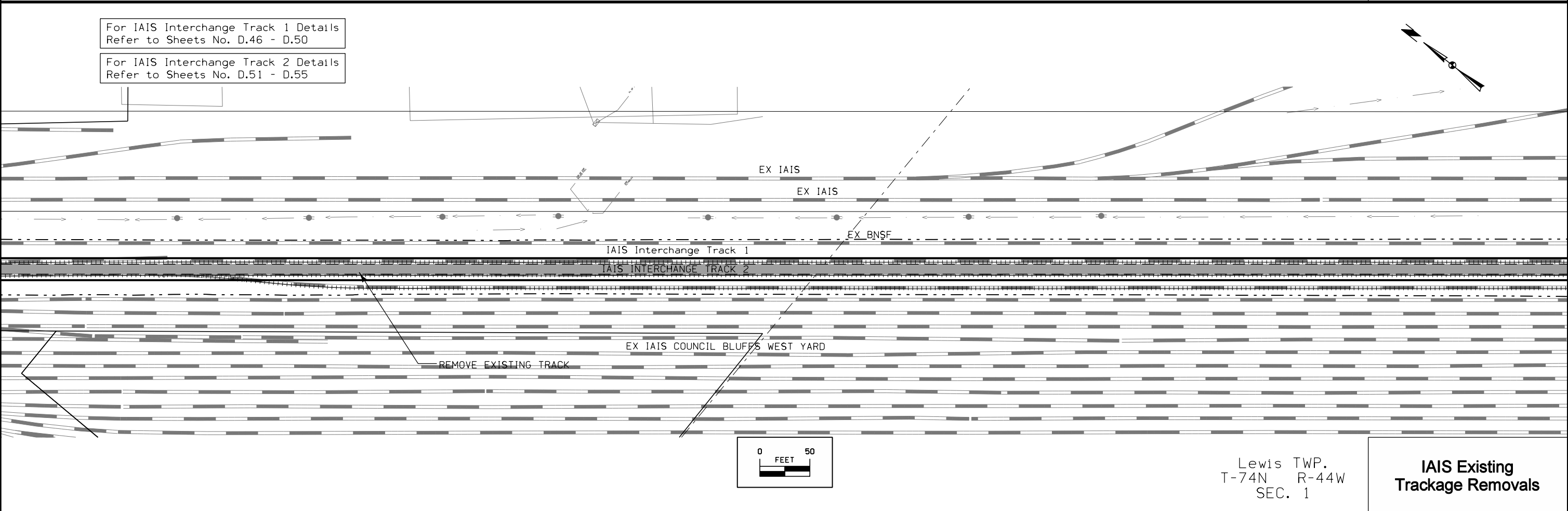
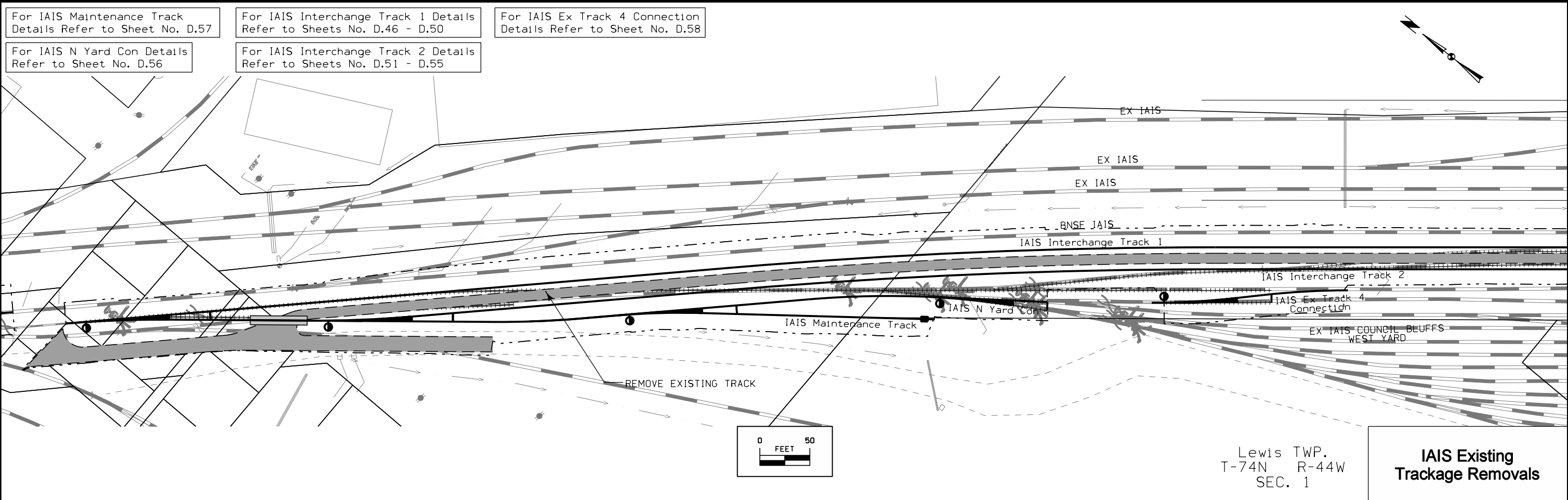
IAIS S Yard Con Sta 3500+00.00
BEGIN CONSTRUCTION

IAIS S Yard Con Sta 3507+30.91
PS NO. 11 LH HTTO
END CONSTRUCTION

Lewis TWP.
T-74N R-43W
SEC. 7

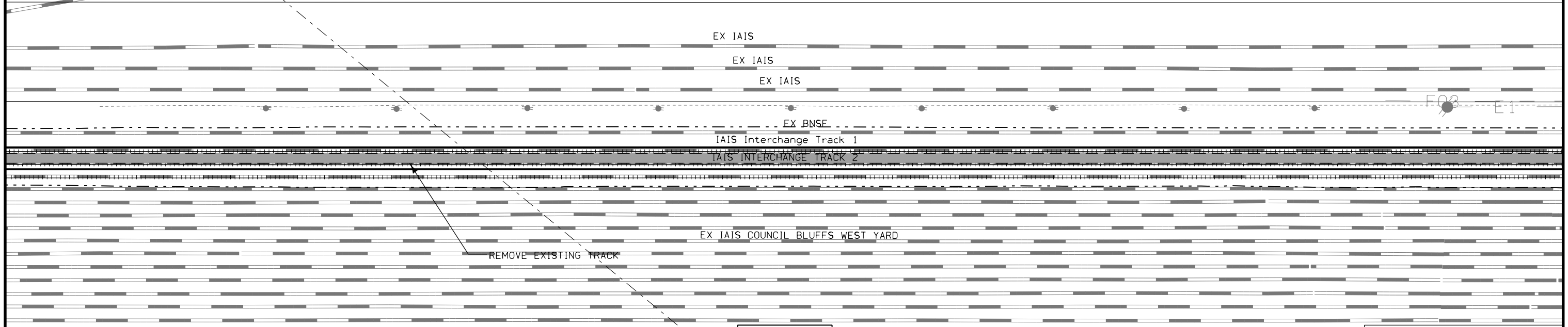
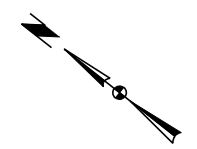
**IAIS
South Yard Connection**



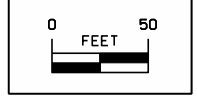


For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55



Lewis TWP. Lewis TWP.
T-74N R-43W T-74N R-43W
SEC. 1 SEC. 6



Lewis TWP.
T-74N R-44W
SEC. 6

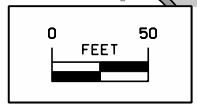
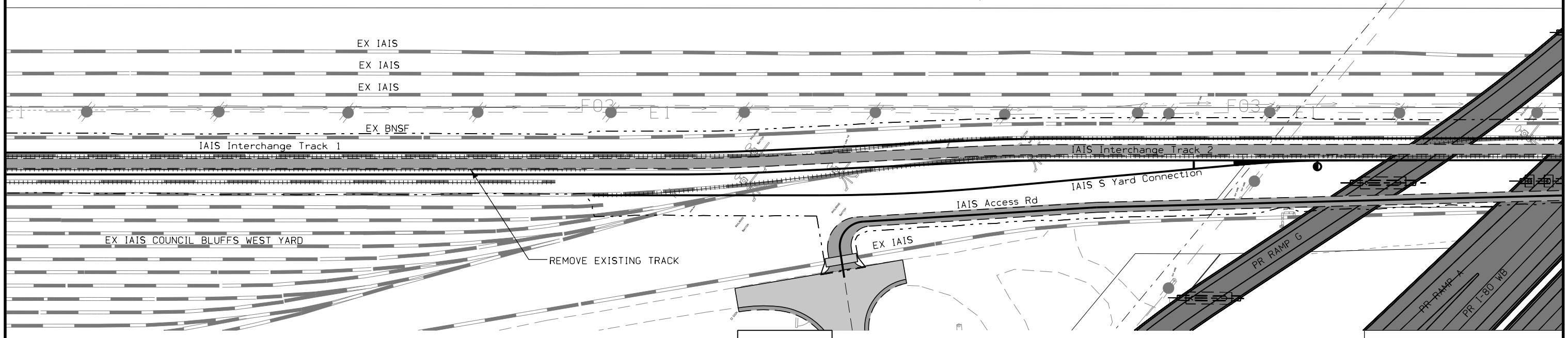
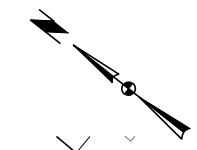
**IAIS Existing
Trackage Removals**

For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

For IAIS S Yard Connection
Details Refer to Sheet No. D.59

For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12



Lewis TWP.
T-74N R-43W
SEC. 7

**IAIS Existing
Trackage Removals**

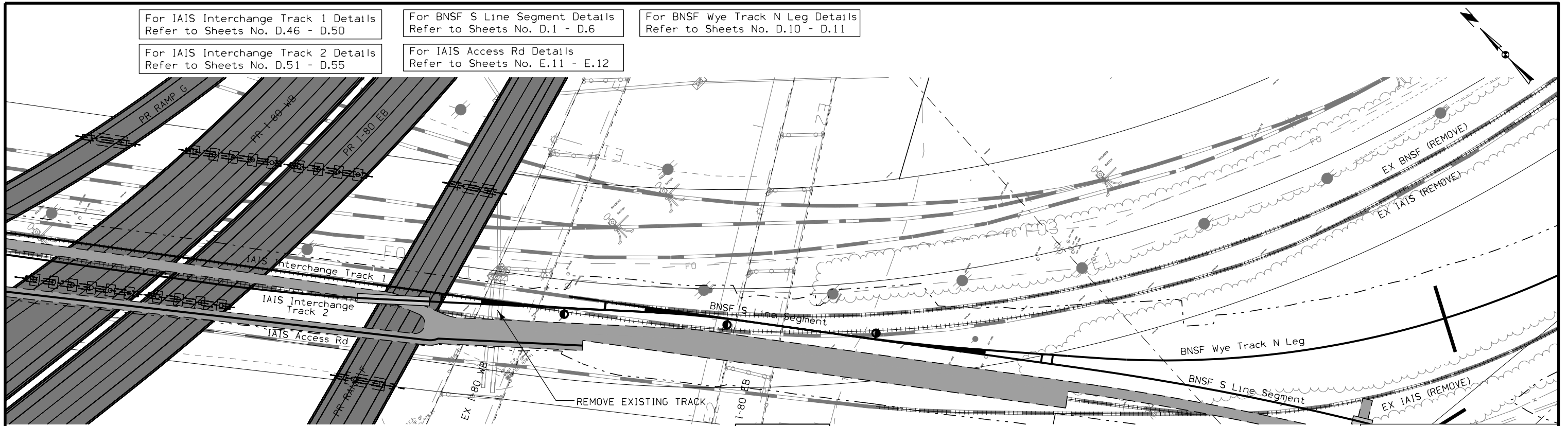
For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For BNSF Wye Track N Leg Details
Refer to Sheets No. D.10 - D.11

For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Access Rd Details
Refer to Sheets No. E.11 - E.12



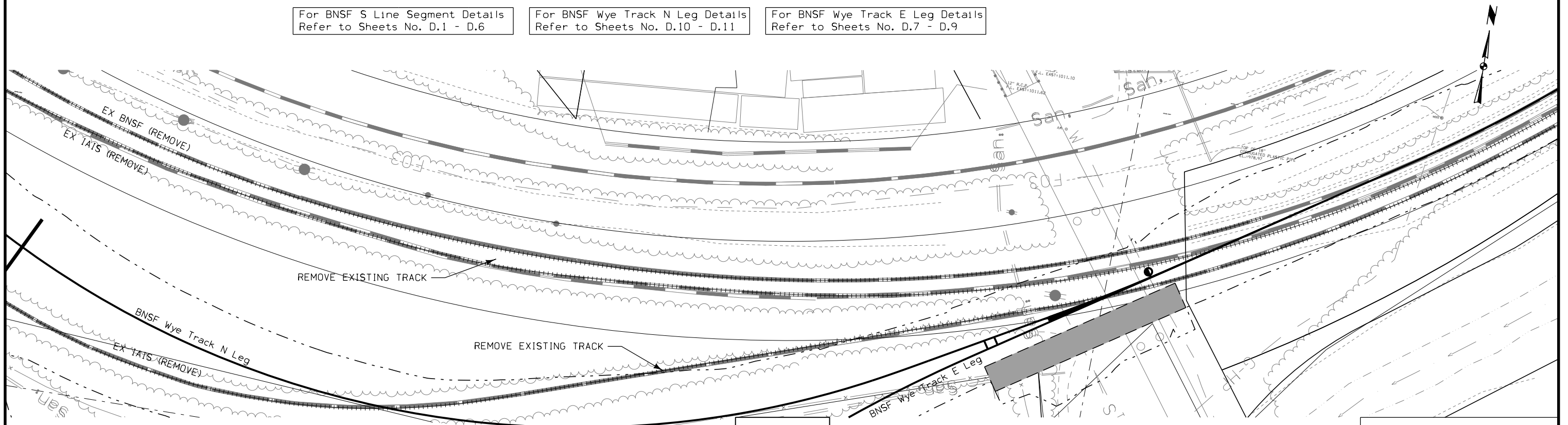
Lewis TWP.
T-74N R-43W
SEC. 7

**IAIS Existing
Trackage Removals**

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For BNSF Wye Track N Leg Details
Refer to Sheets No. D.10 - D.11

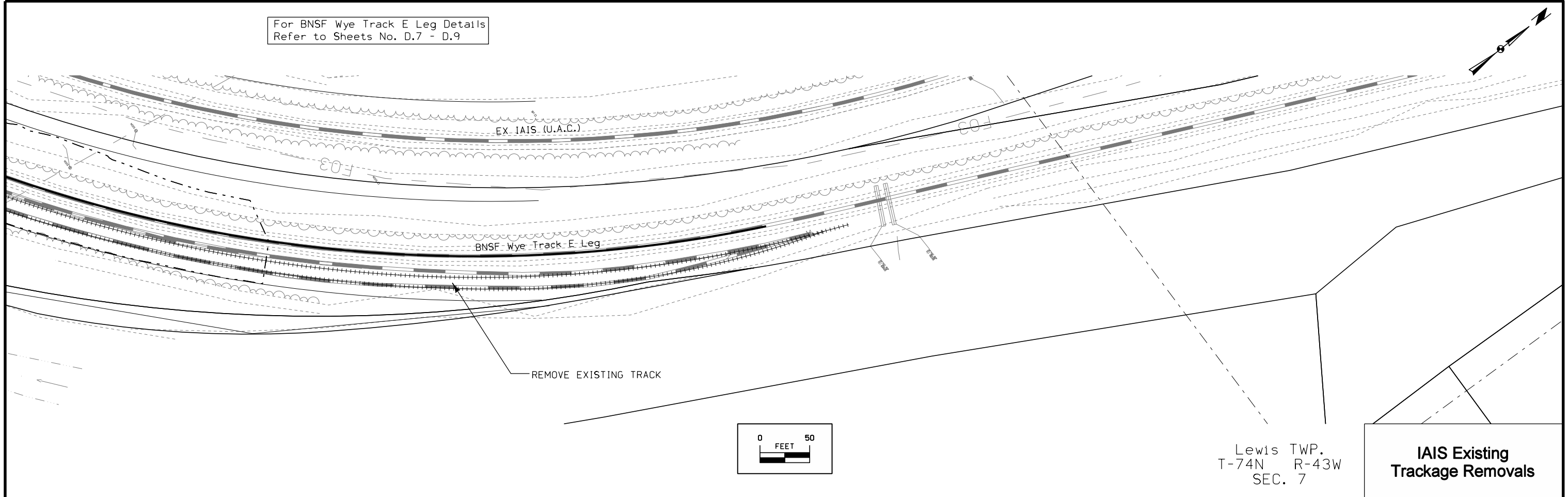
For BNSF Wye Track E Leg Details
Refer to Sheets No. D.7 - D.9

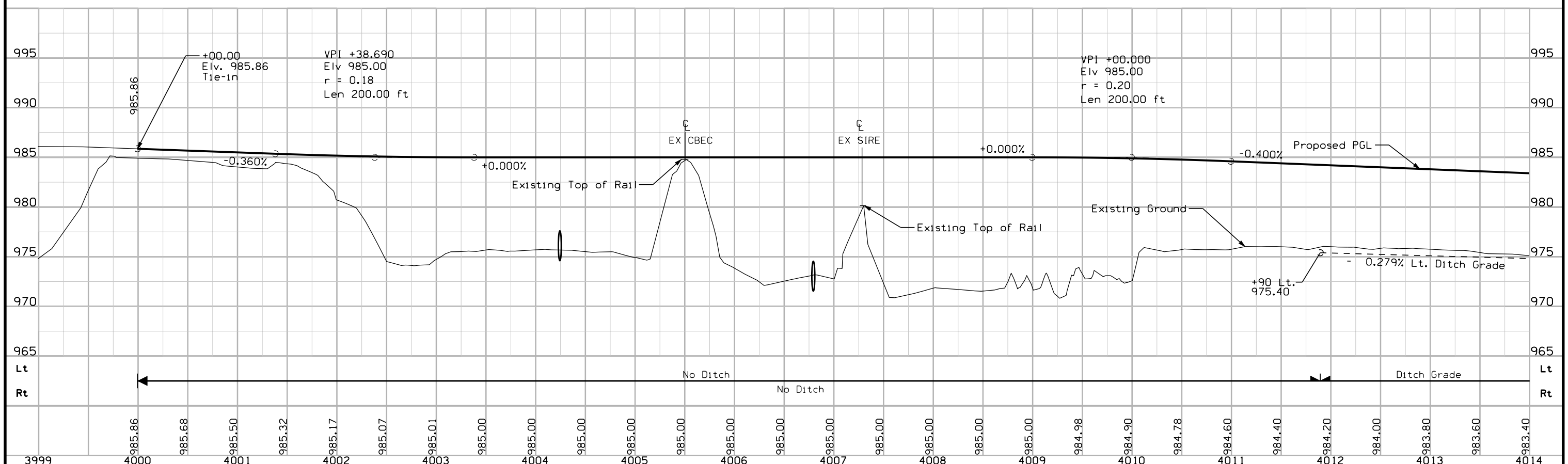
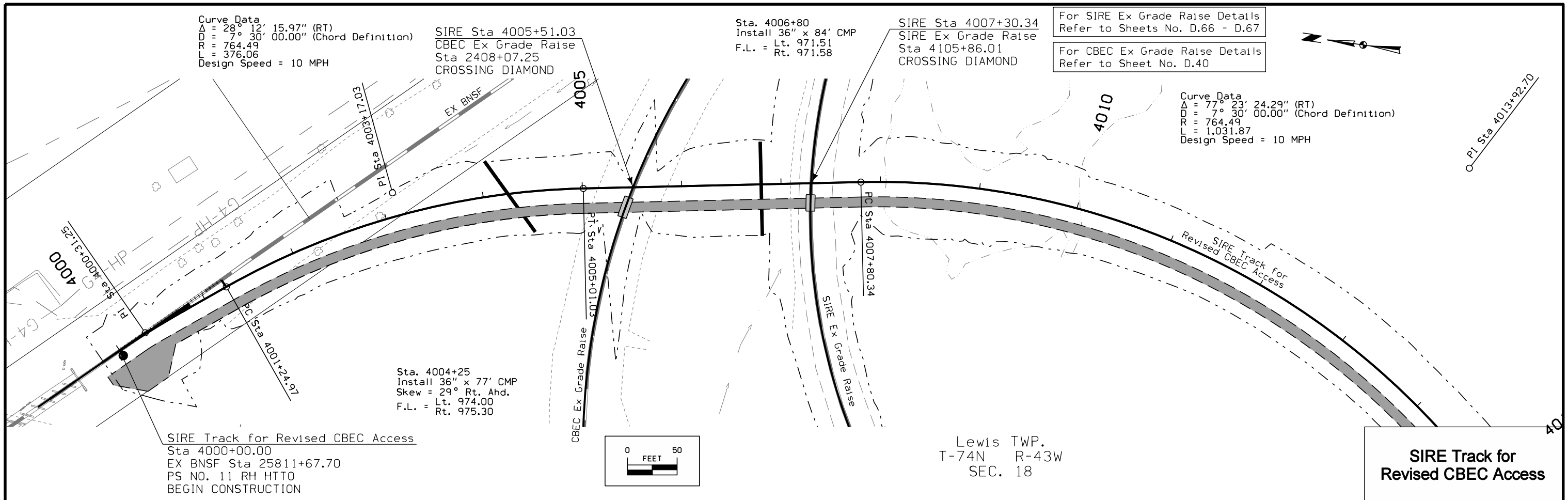


Lewis TWP.
T-74N R-43W
SEC. 7

**IAIS Existing
Trackage Removals**

For BNSF Wye Track E Leg Details
Refer to Sheets No. D.7 - D.9

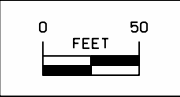
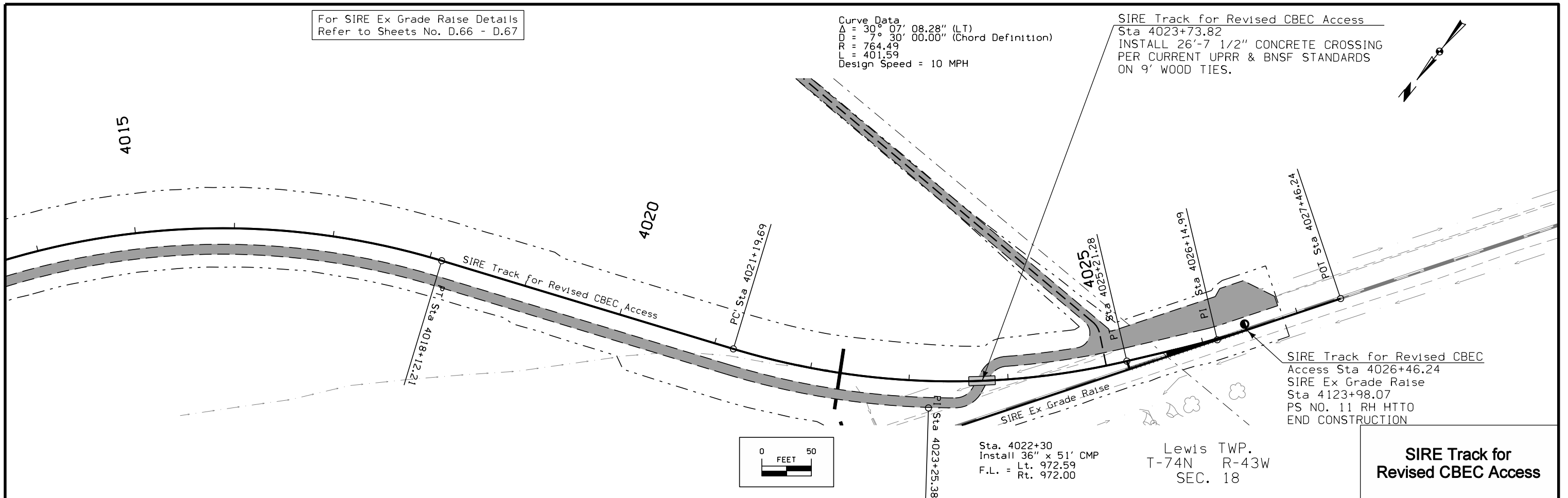
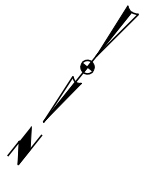




For SIRE Ex Grade Raise Details
Refer to Sheets No. D.66 - D.67

Curve Data
 $\Delta = 30^\circ 07' 08.28''$ (LT)
 $BD = 7' 30' 00.00''$ (Chord Definition)
 $R = 764.49$
 $L = 401.59$
 Design Speed = 10 MPH

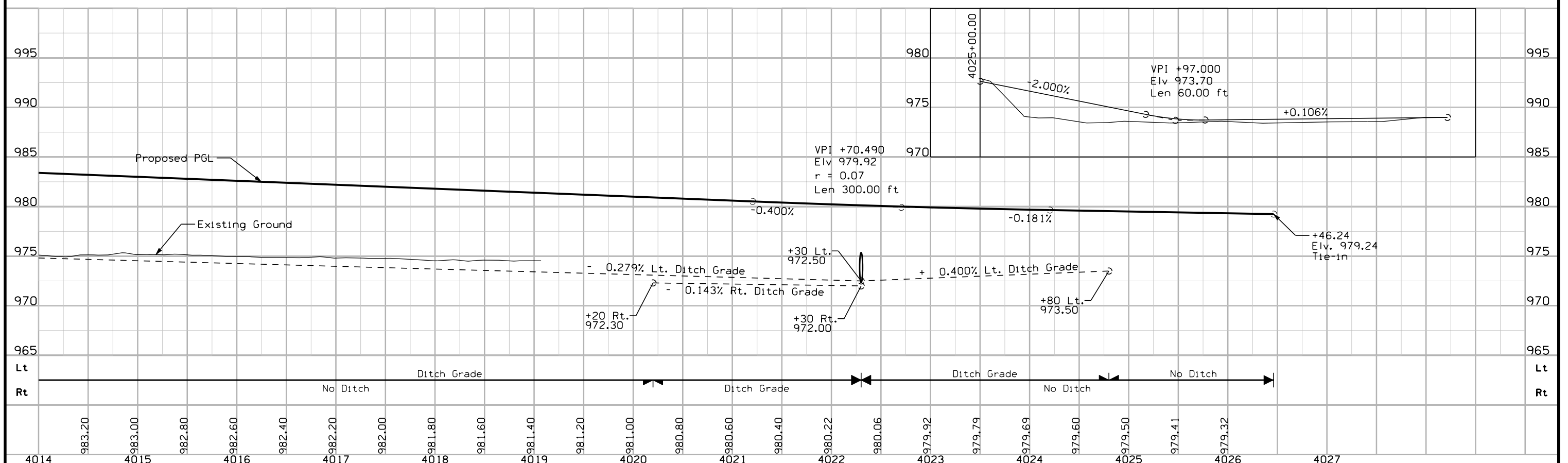
SIRE Track for Revised CBEC Access
 Sta 4023+73.82
 INSTALL 26'-7 1/2" CONCRETE CROSSING
 PER CURRENT UPRR & BNSF STANDARDS
 ON 9' WOOD TIES.



Sta. 4022+30
 Install 36" x 51' CMP
 F.L. = Lt. 972.59
 = Rt. 972.00

Lewis TWP.
 T-74N R-43W
 SEC. 18

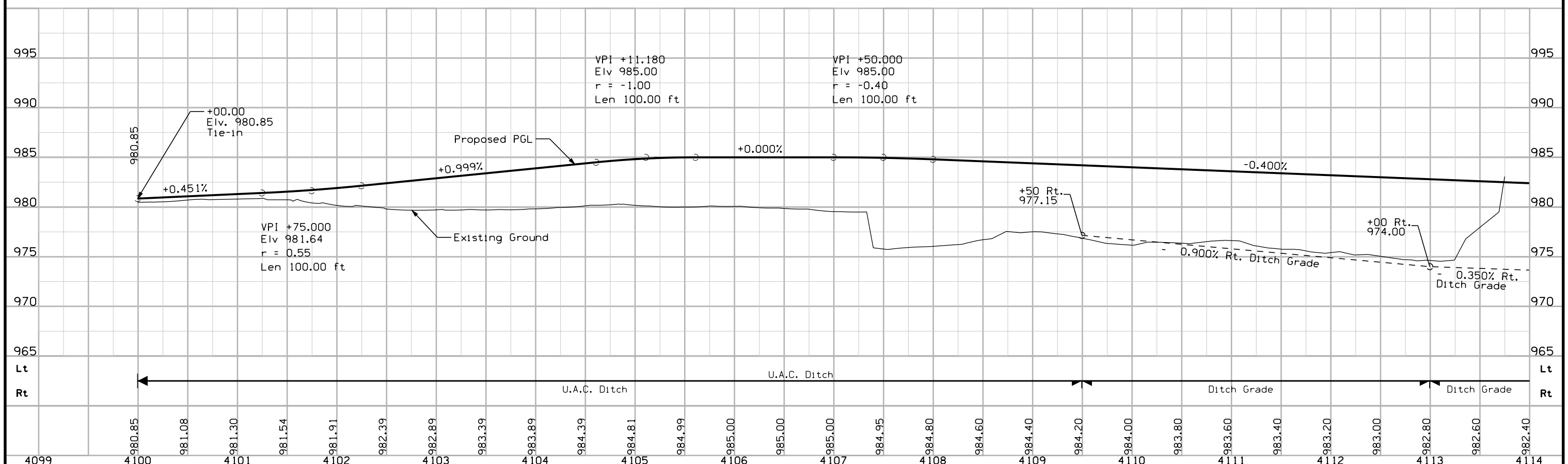
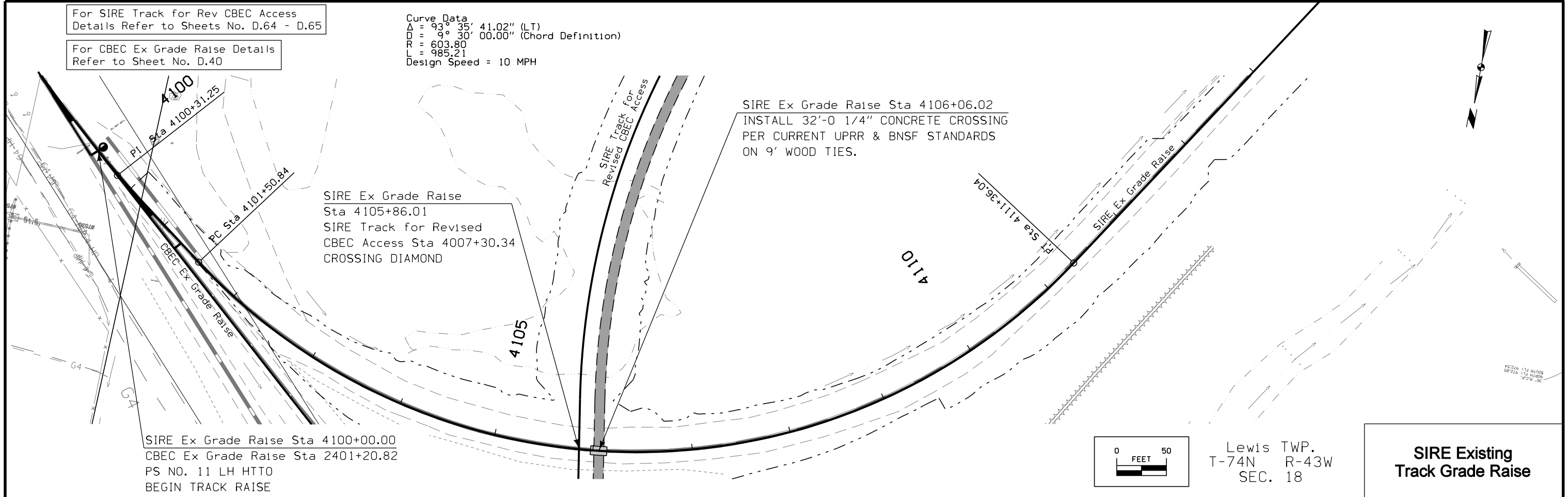
SIRE Track for Revised CBEC Access



For SIRE Track for Rev CBEC Access
Details Refer to Sheets No. D.64 - D.65

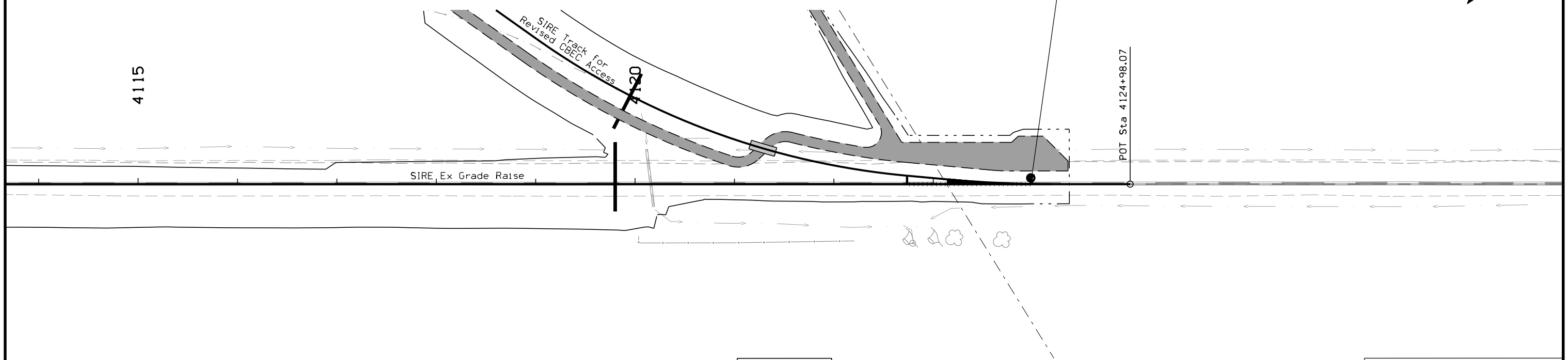
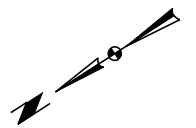
For CBEC Ex Grade Raise Details
Refer to Sheet No. D.40

Curve Data
 $\Delta = 93^\circ 35' 41.02''$ (LT)
 $D = 9^\circ 30' 00.00''$ (Chord Definition)
 $R = 603.80$
 $L = 985.21$
 Design Speed = 10 MPH

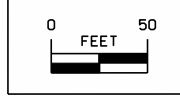


For SIRE Track for Rev CBEC Access
Details Refer to Sheets No. D.64 - D.65

SIRE Ex Grade Raise Sta 4123+98.07
SIRE Track for Revised CBEC Access Sta 4026+46.24
PS NO. 11 RH HTTO
END CONSTRUCTION



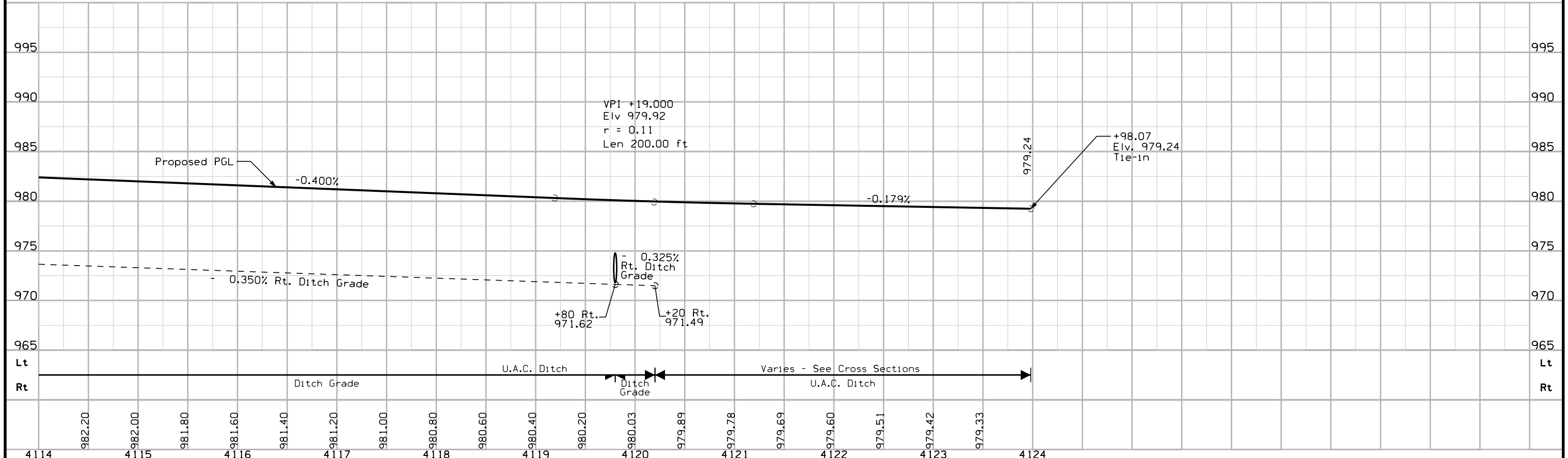
Sta. 4119+80
Jack 36" x 59' STEEL
F.L. = Lt. 972.00
Rt. 971.62



Sta. 4120+16
24" x 57' CMP
DA= Ac.
(FILL AND ABANDON)

Lewis TWP.
T-74N R-43W
SEC. 18

**SIRE Existing
Track Grade Raise**



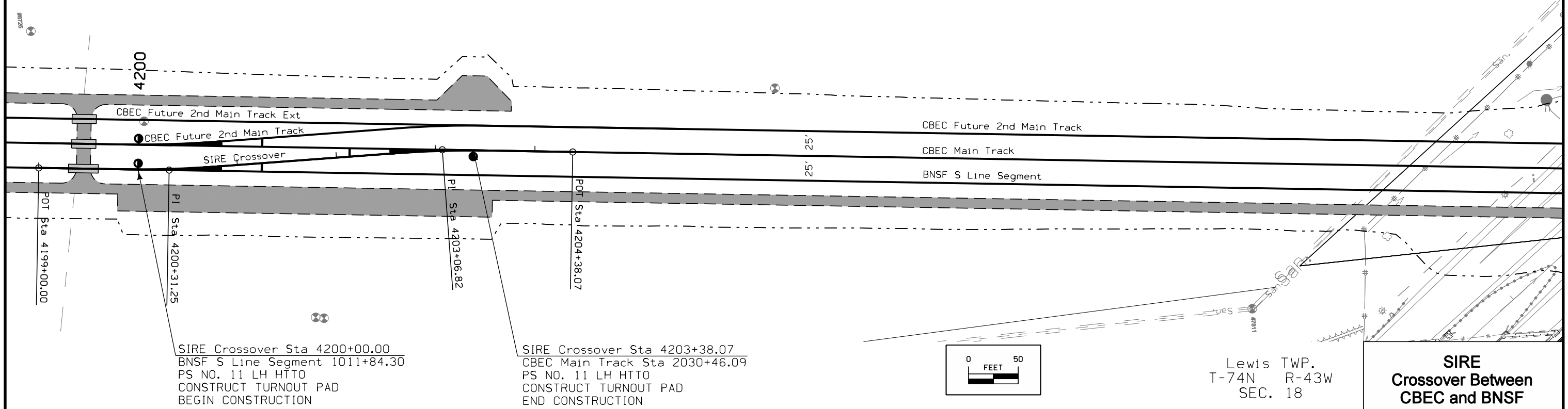
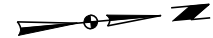
4114	982.20	4115	982.00	4116	981.80	4117	981.60	4118	981.40	4119	981.20	4120	981.00	4121	980.80	4122	980.60	4123	980.40	4124	980.20
------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------	------	--------

For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28

For CBEC Future 2nd Main Track Extension
Details Refer to Sheets No. D.36 - D.38

For CBEC Future 2nd Main Track Details
Refer to Sheets No. D.29 - D.35



SIRE Crossover Sta 4200+00.00
 BNSF S Line Segment 1011+84.30
 PS NO. 11 LH HTTO
 CONSTRUCT TURNOUT PAD
 BEGIN CONSTRUCTION

SIRE Crossover Sta 4203+38.07
 CBEC Main Track Sta 2030+46.09
 PS NO. 11 LH HTTO
 CONSTRUCT TURNOUT PAD
 END CONSTRUCTION

**SIRE
 Crossover Between
 CBEC and BNSF**



For Bartlett Track Con Details
Refer to Sheets No. D.71 - D.73

For BNSF Existing Trackage Removal
Details Refer to Sheets No. D.17 - D.21

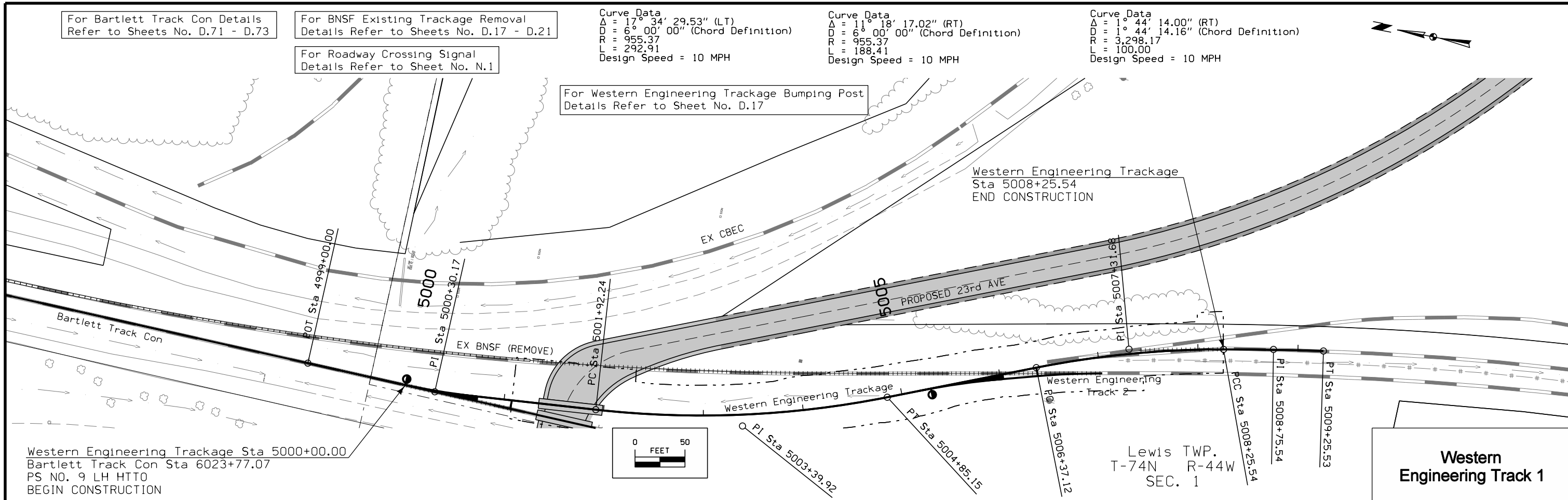
For Roadway Crossing Signal
Details Refer to Sheet No. N.1

For Western Engineering Trackage Bumping Post
Details Refer to Sheet No. D.17

Curve Data
Δ = 17° 34' 29.53" (LT)
D = 6° 00' 00" (Chord Definition)
R = 955.37
L = 292.91
Design Speed = 10 MPH

Curve Data
Δ = 11° 18' 17.02" (RT)
D = 6° 00' 00" (Chord Definition)
R = 955.37
L = 188.41
Design Speed = 10 MPH

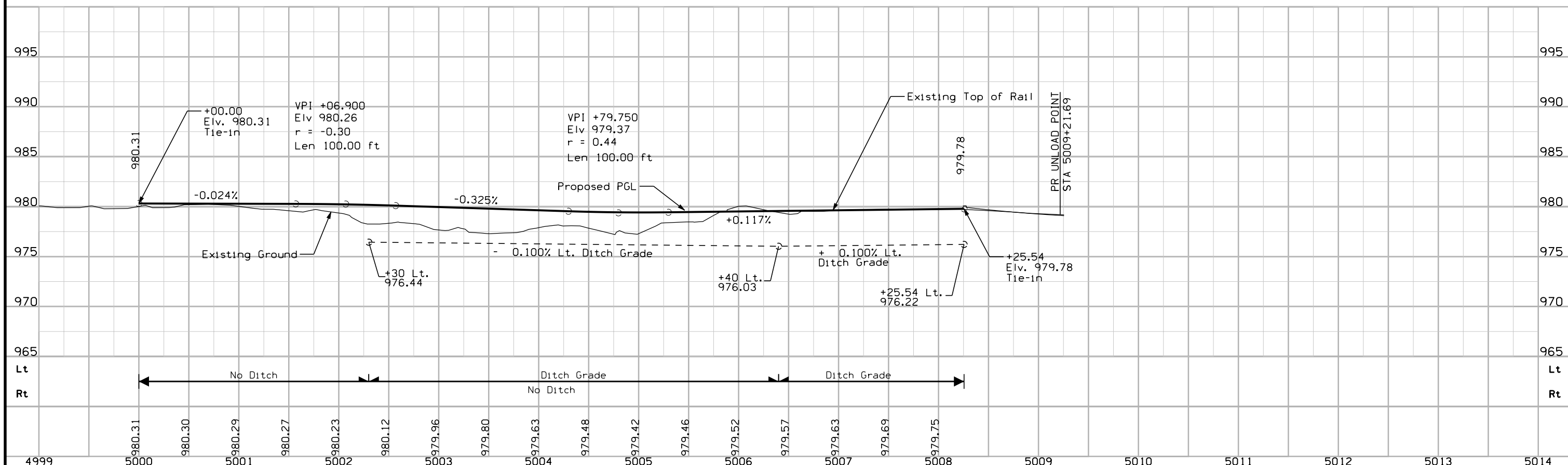
Curve Data
Δ = 1° 44' 14.00" (RT)
D = 1° 44' 14.16" (Chord Definition)
R = 3,298.17
L = 100.00
Design Speed = 10 MPH



Western Engineering Trackage Sta 5000+00.00
Bartlett Track Con Sta 6023+77.07
PS NO. 9 LH HTTO
BEGIN CONSTRUCTION

Lewis TWP.
T-74N R-44W
SEC. 1

Western Engineering Track 1

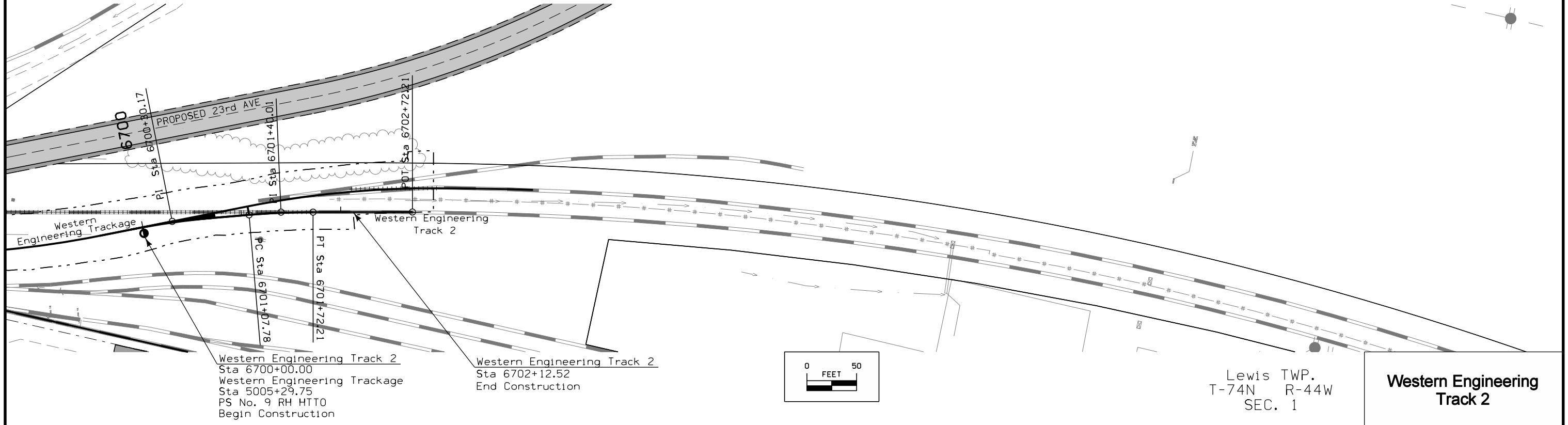
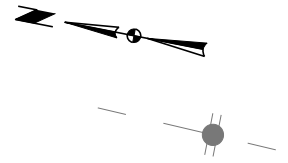


Curve Data
 $\Delta = 4^\circ 49' 43.75''$ (RT)
 $D = 7^\circ 29' 40.83''$
 $R = 764.49$
 $L = 64.43$
 Design Speed = 10 MPH

For BNSF Existing Trackage Removal
 Details Refer to Sheets No. D.17 - D.21

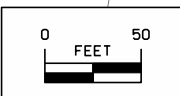
For Western Engineering Track 1
 Details Refer to Sheet No. D.69

For Western Engineering Track 2 Bumping Post
 Details Refer to Sheet No. D.17



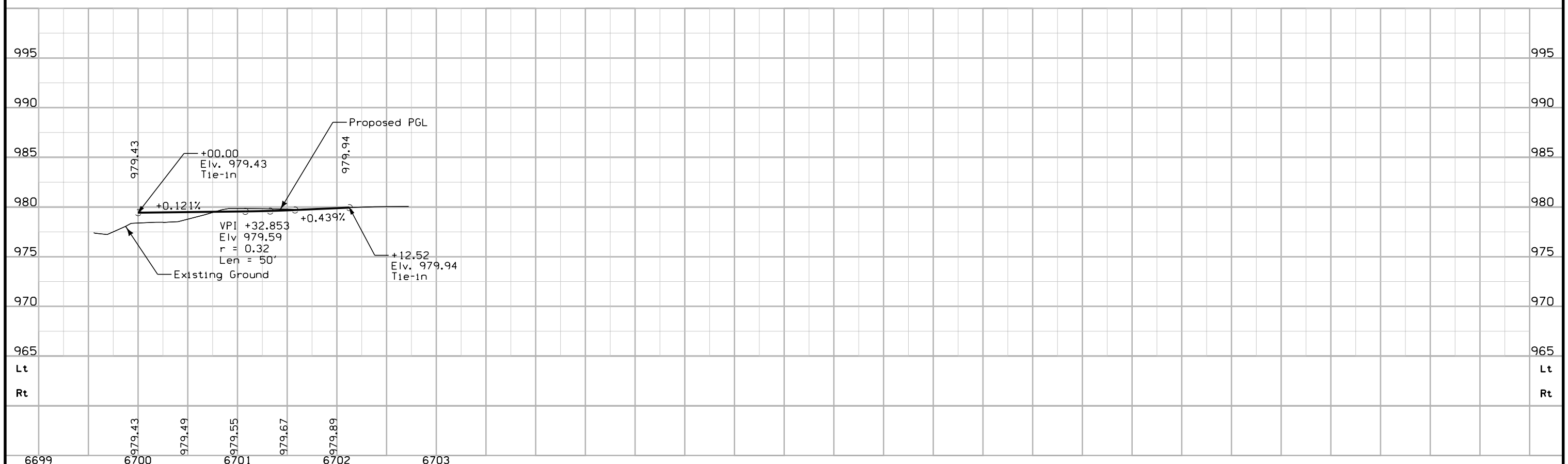
Western Engineering Track 2
 Sta 6700+00.00
 Western Engineering Trackage
 Sta 5005+29.75
 PS No. 9 RH HTTO
 Begin Construction

Western Engineering Track 2
 Sta 6702+12.52
 End Construction



Lewis TWP.
 T-74N R-44W
 SEC. 1

**Western Engineering
 Track 2**



Curve Data
 $\Delta = 45^\circ 51' 47.69''$ (RT)
 $D = 764.49'$ (Chord Definition)
 $R = 376.06'$
 Design Speed = 10 MPH

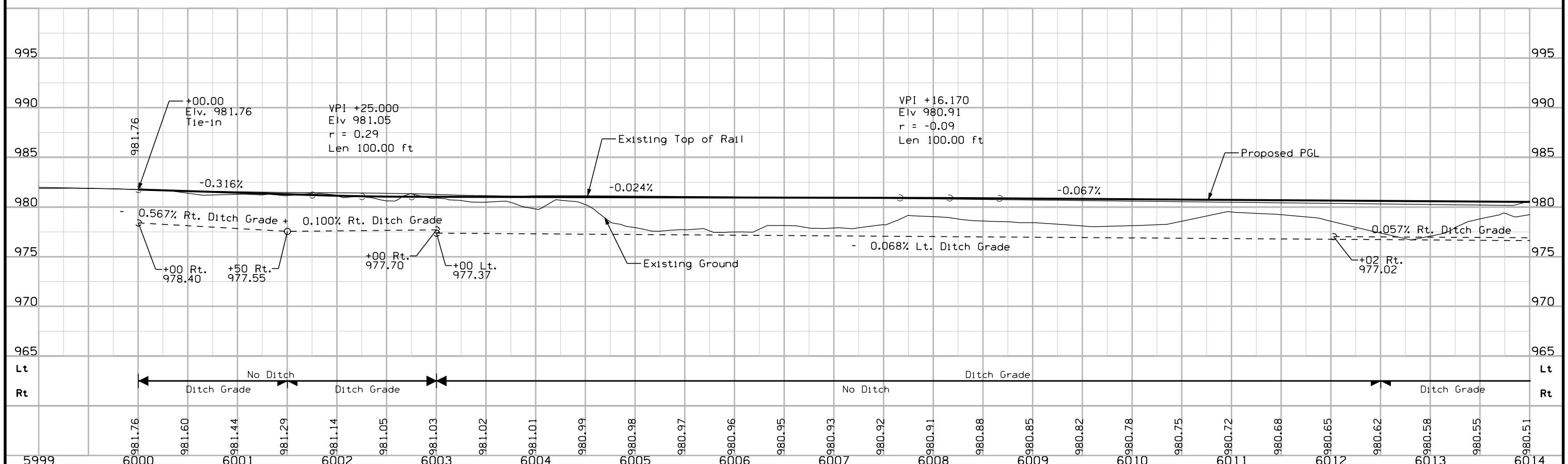
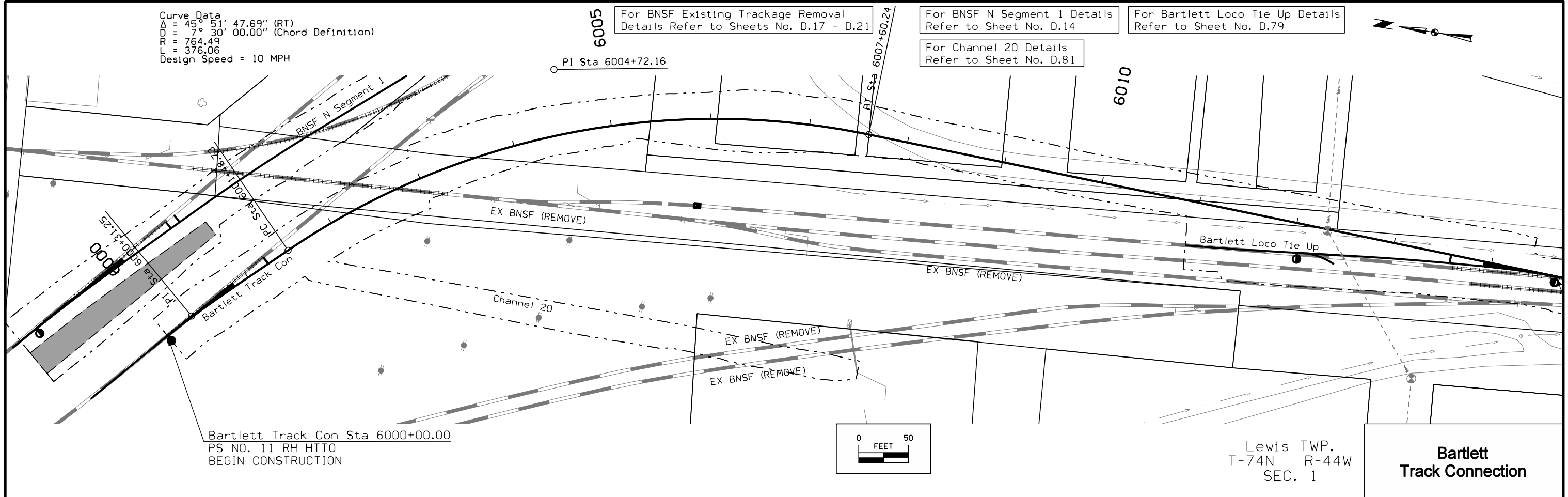
6005

For BNSF Existing Trackage Removal
 Details Refer to Sheets No. D.17 - D.21

For BNSF N Segment 1 Details
 Refer to Sheet No. D.14

For Bartlett Loco Tie Up Details
 Refer to Sheet No. D.79

For Channel 20 Details
 Refer to Sheet No. D.81



5999	6000	6001	6002	6003	6004	6005	6006	6007	6008	6009	6010	6011	6012	6013	6014
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

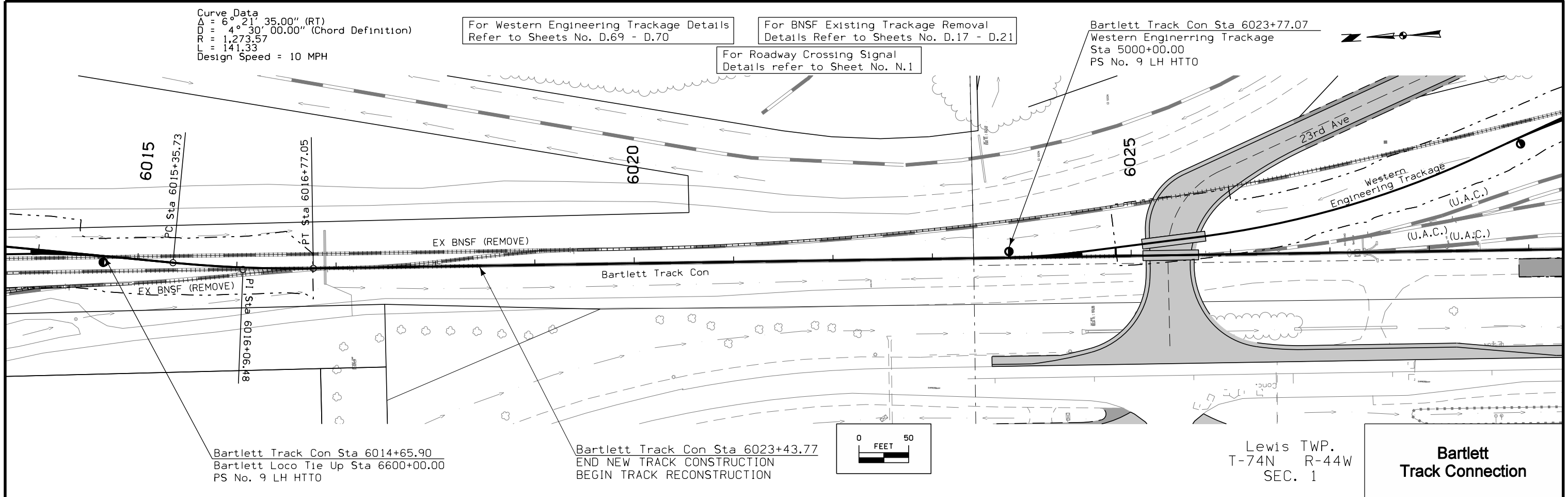
Curve Data
 $\Delta = 6^{\circ} 21' 35.00''$ (RT)
 $D = 4^{\circ} 30' 00.00''$ (Chord Definition)
 $R = 1,273.57$
 $L = 141.33$
 Design Speed = 10 MPH

For Western Engineering Trackage Details
 Refer to Sheets No. D.69 - D.70

For BNSF Existing Trackage Removal
 Details Refer to Sheets No. D.17 - D.21

For Roadway Crossing Signal
 Details refer to Sheet No. N.1

Bartlett Track Con Sta 6023+77.07
 Western Engineering Trackage
 Sta 5000+00.00
 PS No. 9 LH HTTO

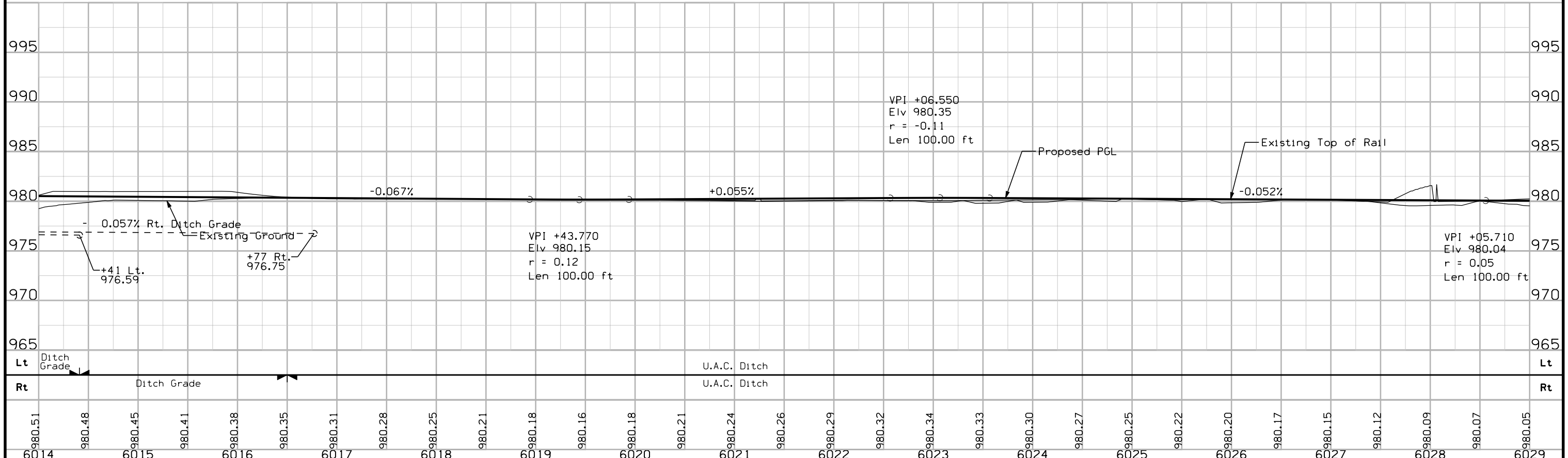


Bartlett Track Con Sta 6014+65.90
 Bartlett Loco Tie Up Sta 6600+00.00
 PS No. 9 LH HTTO

Bartlett Track Con Sta 6023+43.77
 END NEW TRACK CONSTRUCTION
 BEGIN TRACK RECONSTRUCTION

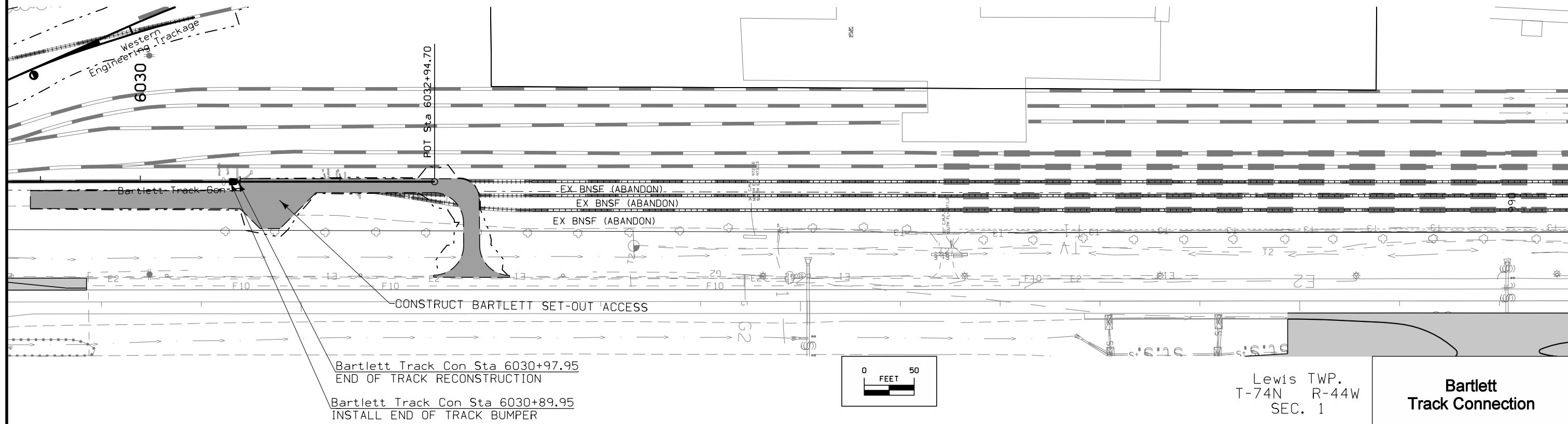
Lewis TWP.
 T-74N R-44W
 SEC. 1

**Bartlett
 Track Connection**



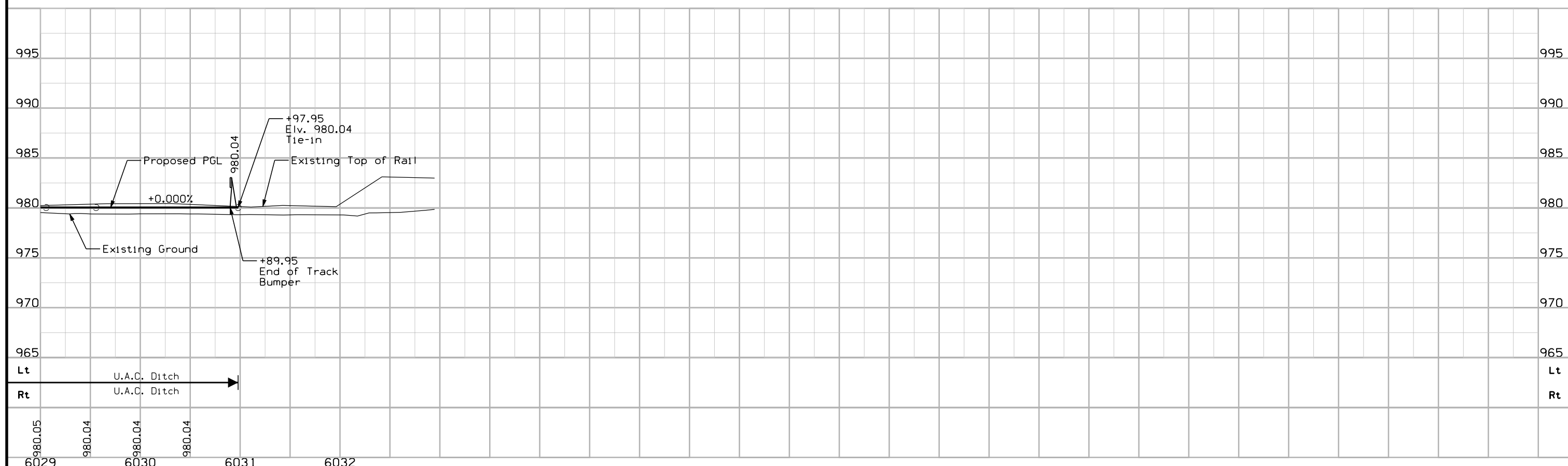
For BNSF Existing Trackage Removal
Details Refer to Sheets No. D.17 - D.21

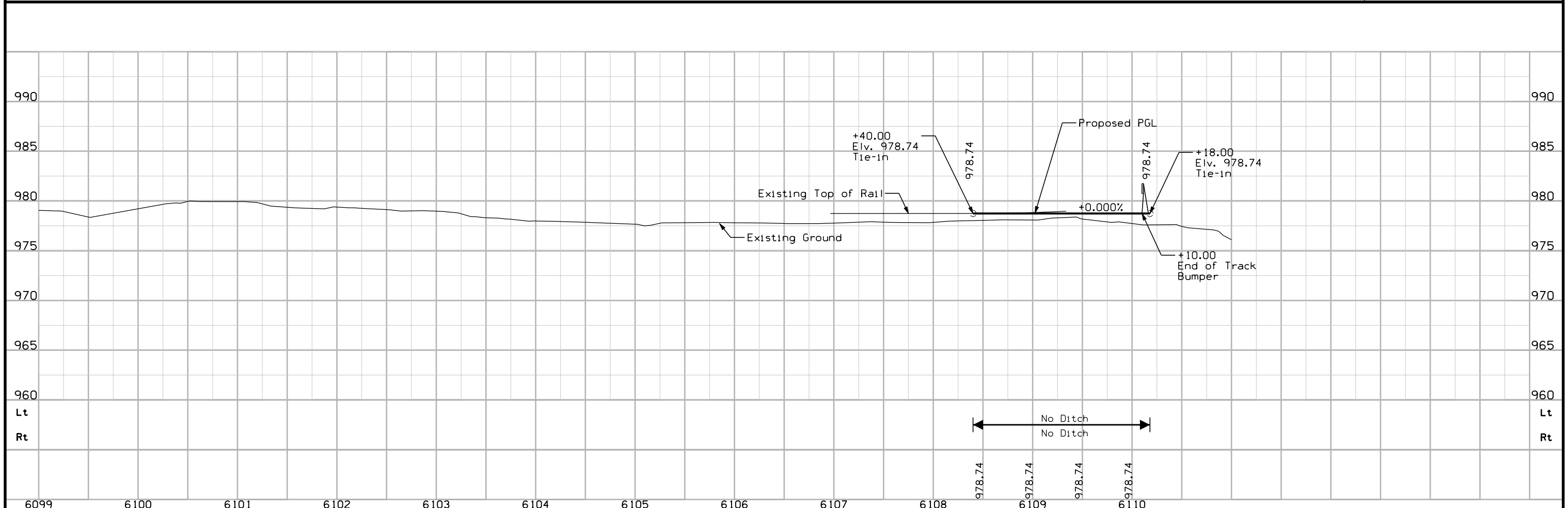
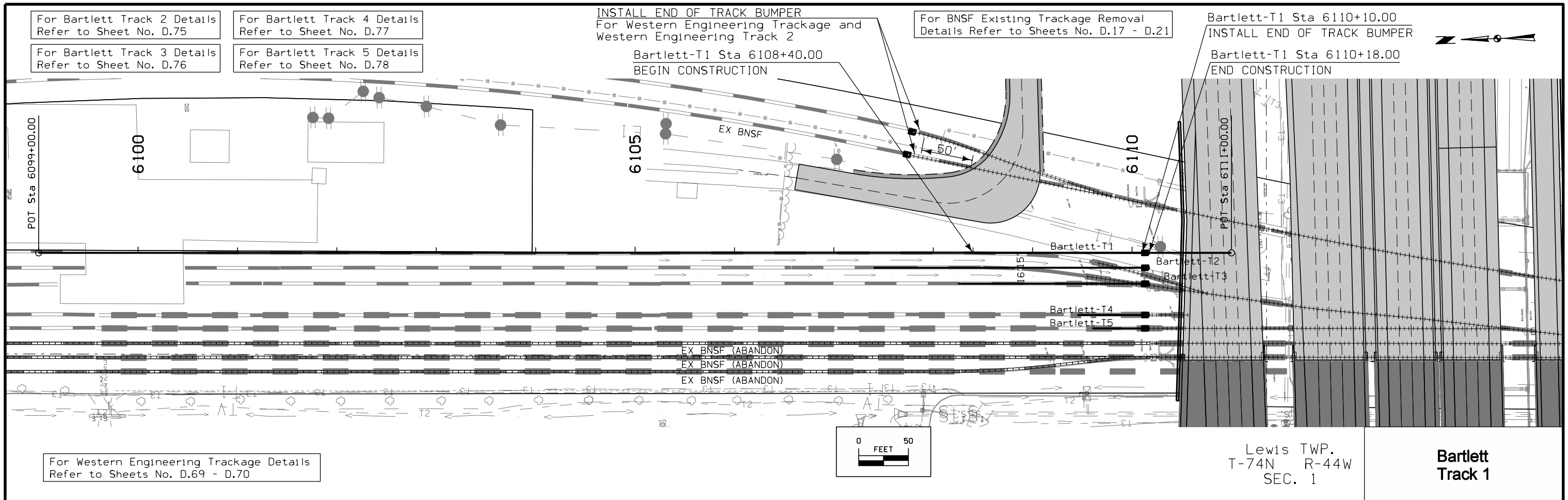
For Western Engineering Trackage
Details Refer to Sheets No. D.69 - D.70

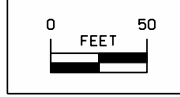
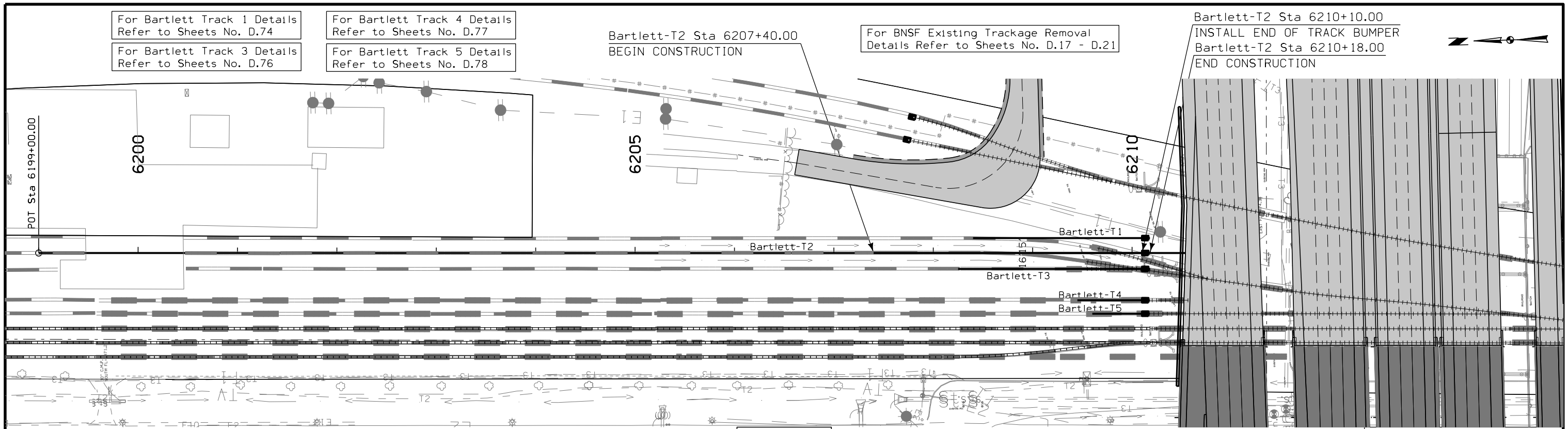


Lewis TWP.
T-74N R-44W
SEC. 1

Bartlett Track Connection

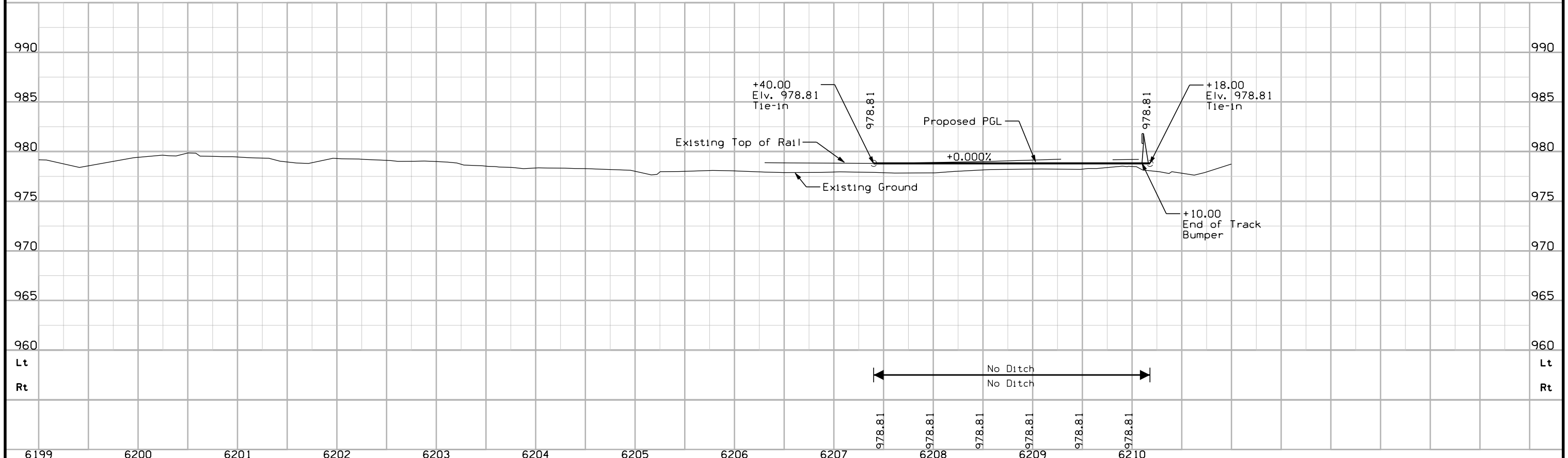






Lewis TWP.
 T-74N R-44W
 SEC. 1

**Bartlett
 Track 2**

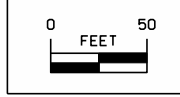
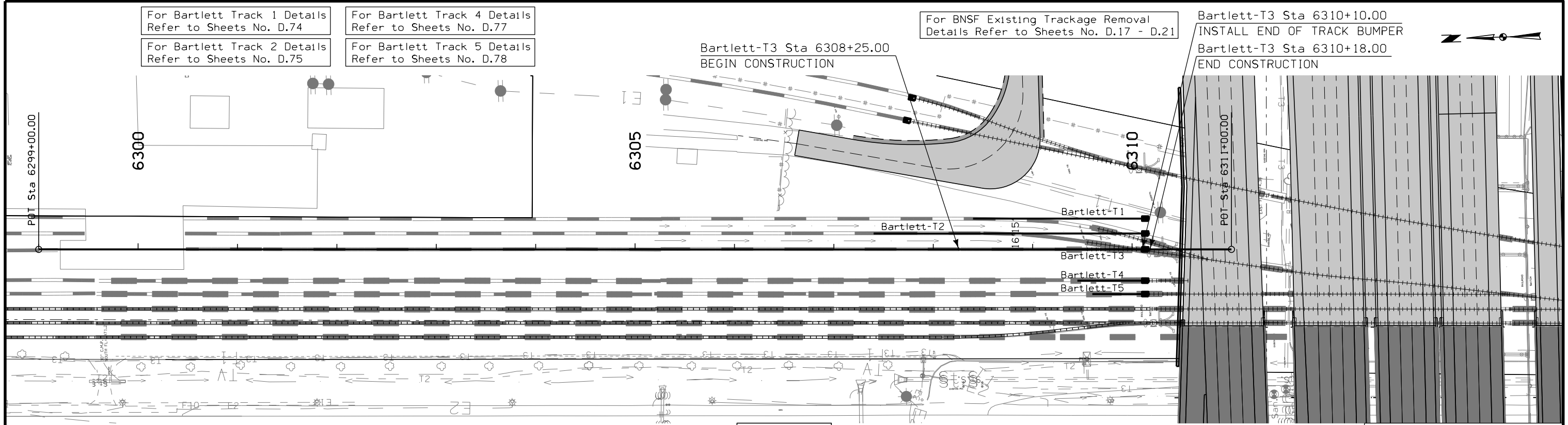


For Bartlett Track 1 Details
Refer to Sheets No. D.74

For Bartlett Track 4 Details
Refer to Sheets No. D.77

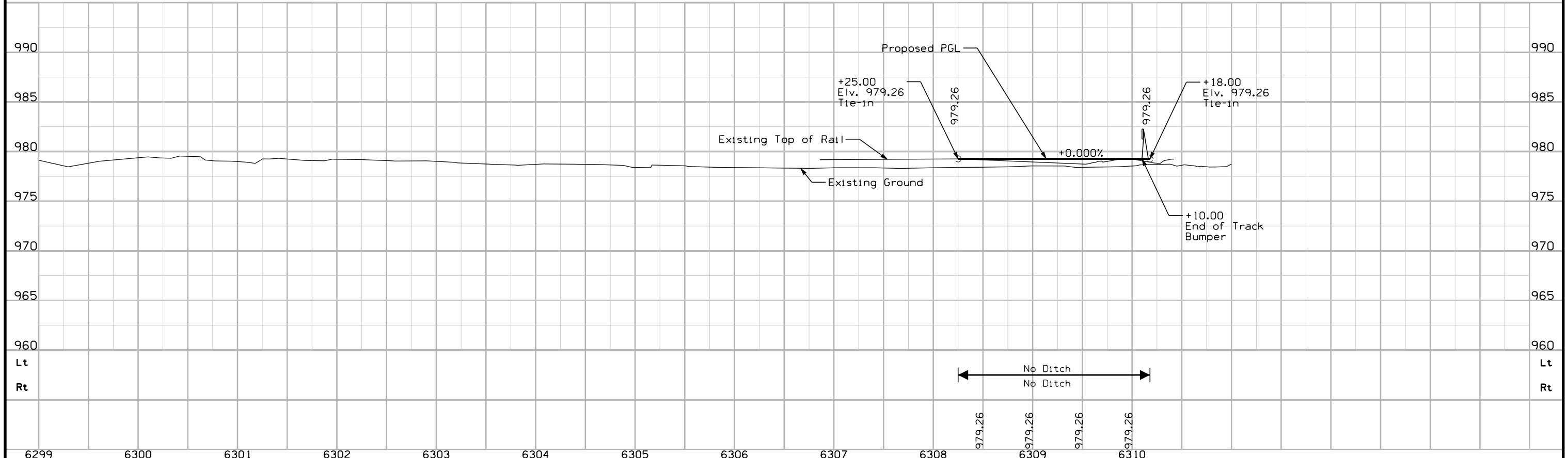
For BNSF Existing Trackage Removal
Details Refer to Sheets No. D.17 - D.21

Bartlett-T3 Sta 6310+10.00
INSTALL END OF TRACK BUMPER
Bartlett-T3 Sta 6310+18.00
END CONSTRUCTION



Lewis TWP.
T-74N R-44W
SEC. 1

**Bartlett
Track 3**



For Bartlett Track 1 Details
Refer to Sheets No. D.74

For Bartlett Track 2 Details
Refer to Sheets No. D.75

For Bartlett Track 3 Details
Refer to Sheets No. D.76

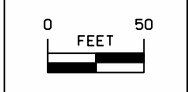
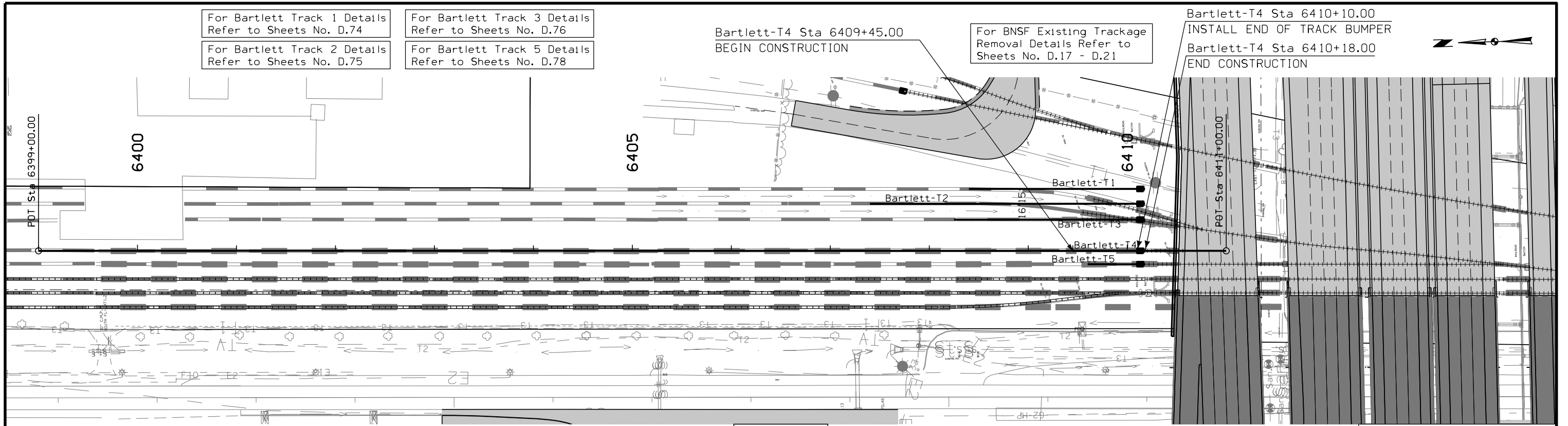
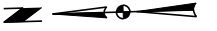
For Bartlett Track 5 Details
Refer to Sheets No. D.78

Bartlett-T4 Sta 6409+45.00
BEGIN CONSTRUCTION

For BNSF Existing Trackage
Removal Details Refer to
Sheets No. D.17 - D.21

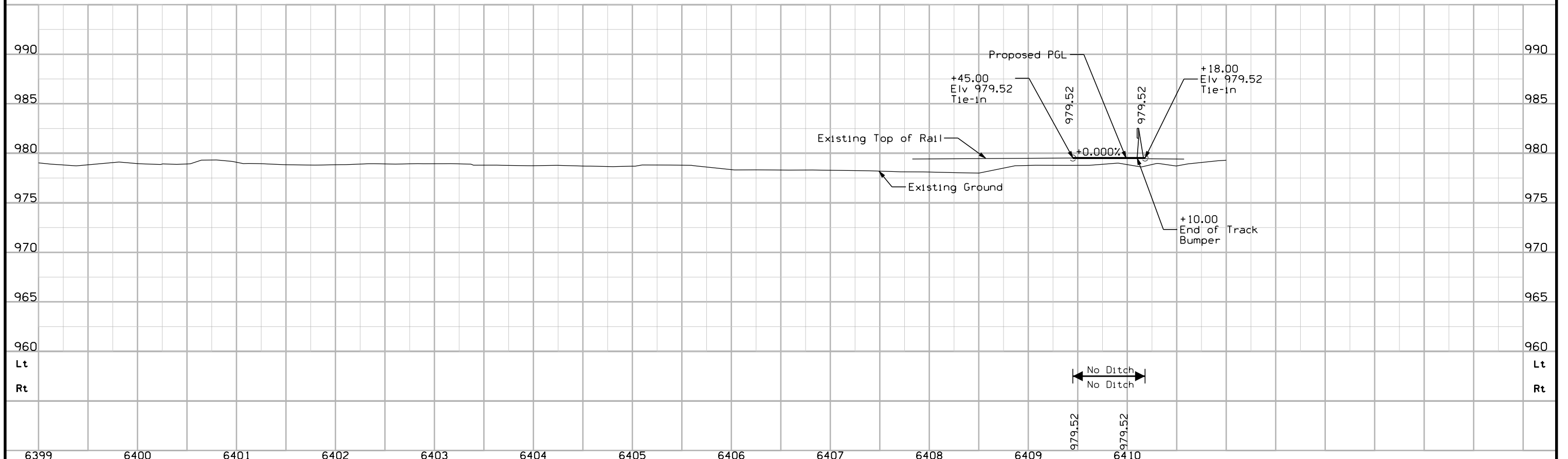
Bartlett-T4 Sta 6410+10.00
INSTALL END OF TRACK BUMPER

Bartlett-T4 Sta 6410+18.00
END CONSTRUCTION



Lewis TWP.
T-74N R-44W
SEC. 1

**Bartlett
Track 4**



For Bartlett Track 1 Details
Refer to Sheets No. D.74

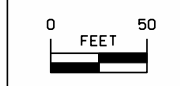
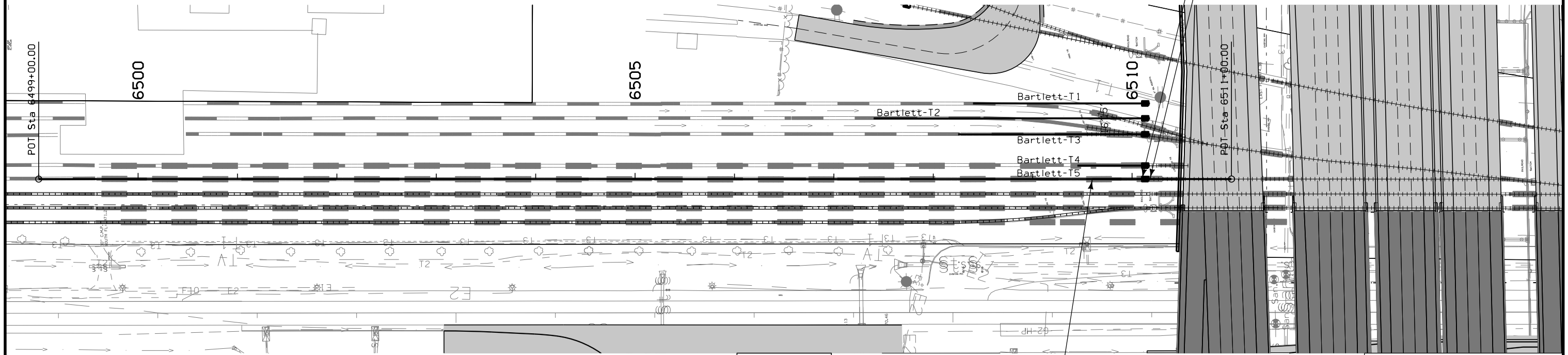
For Bartlett Track 3 Details
Refer to Sheets No. D.76

For BNSF Existing Trackage Removal
Details Refer to Sheets No. D.17 - D.21

For Bartlett Track 2 Details
Refer to Sheets No. D.75

For Bartlett Track 4 Details
Refer to Sheets No. D.77

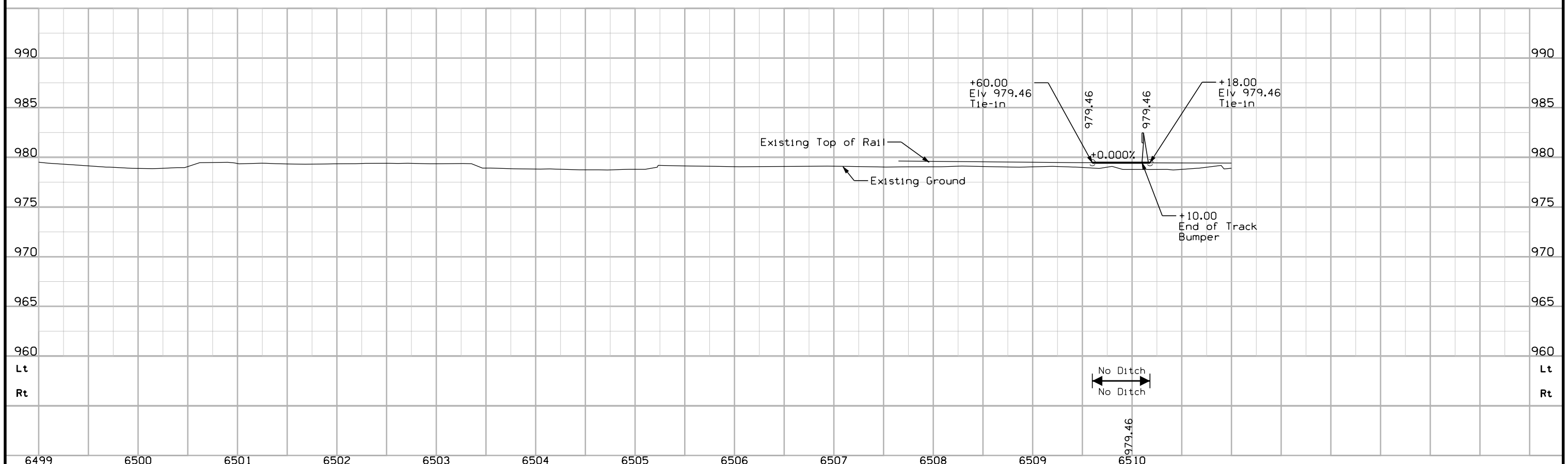
Bartlett-T5 Sta 6510+10.00
INSTALL END OF TRACK BUMPER
Bartlett-T5 Sta 6510+18.00
END CONSTRUCTION



Bartlett-T5 Sta 6509+60.00
BEGIN CONSTRUCTION

Lewis TWP.
T-74N R-44W
SEC. 1

**Bartlett
Track 5**



Curve Data
 $\Delta = 2^{\circ}01'29.53''$ (LT)
 $D = 2^{\circ}15'00.00''$ (Chord Definition)
 $R = 2,546.64$
 $L = 89.99$
 Design Speed = 10 MPH

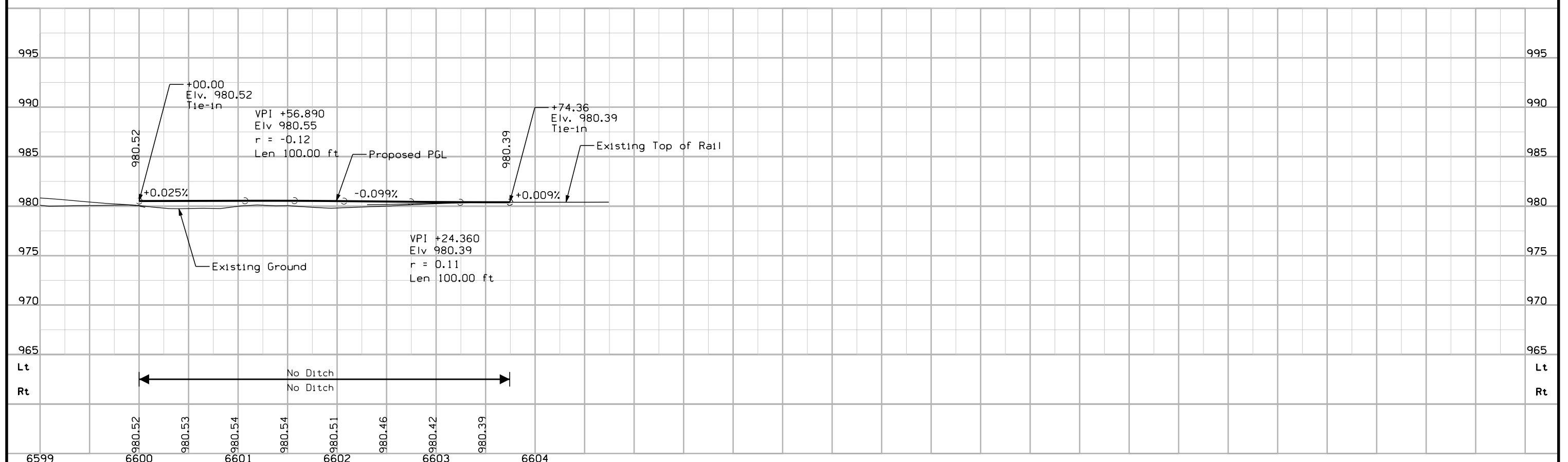
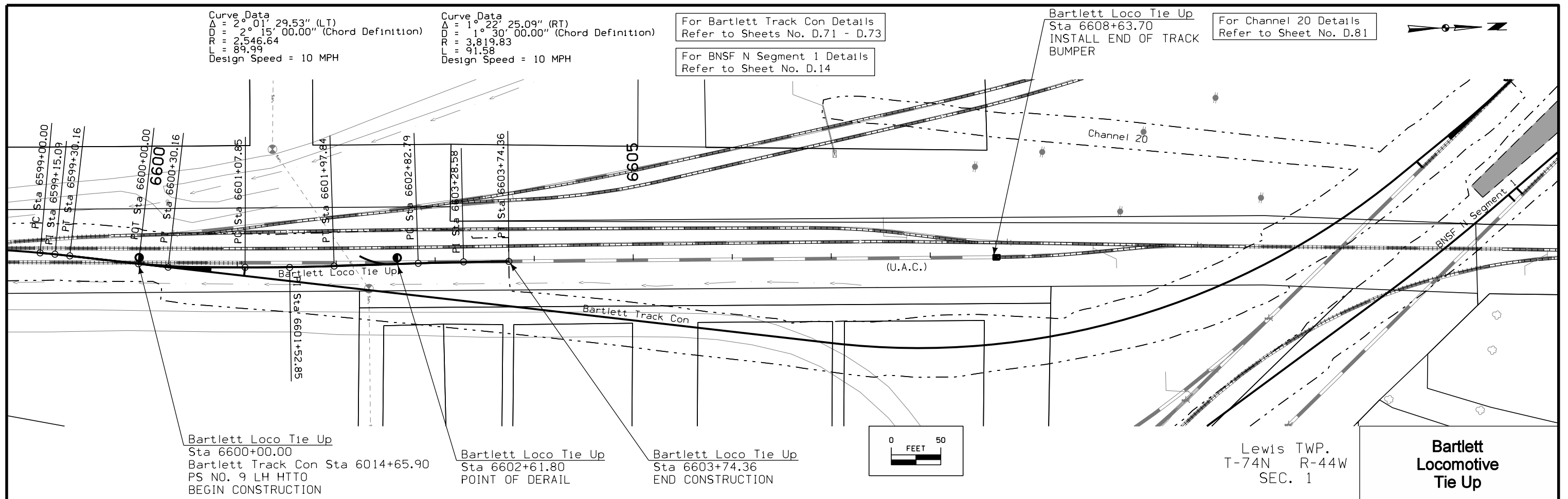
Curve Data
 $\Delta = 1^{\circ}22'25.09''$ (RT)
 $D = 1^{\circ}30'00.00''$ (Chord Definition)
 $R = 3,819.83$
 $L = 91.58$
 Design Speed = 10 MPH

For Bartlett Track Con Details
 Refer to Sheets No. D.71 - D.73

For BNSF N Segment 1 Details
 Refer to Sheet No. D.14

Bartlett Loco Tie Up
 Sta 6608+63.70
 INSTALL END OF TRACK
 BUMPER

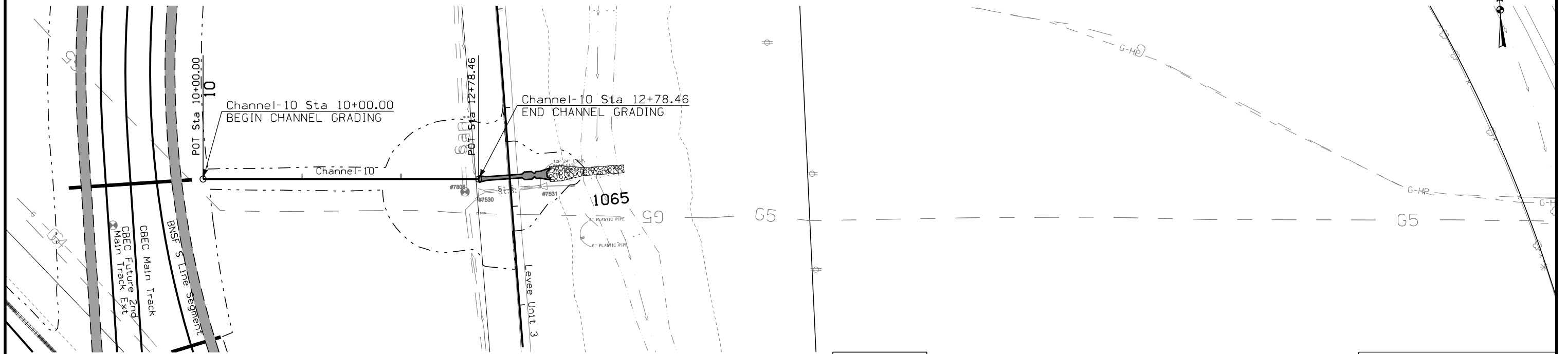
For Channel 20 Details
 Refer to Sheet No. D.81



For BNSF S Line Segment Details
Refer to Sheets No. D.1 - D.6

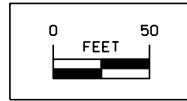
For CBEC Main Track Details
Refer to Sheets No. D.22 - D.28

For CBEC Future 2nd Main Track Ext
Details Refer to Sheets No. D.36 - D.38



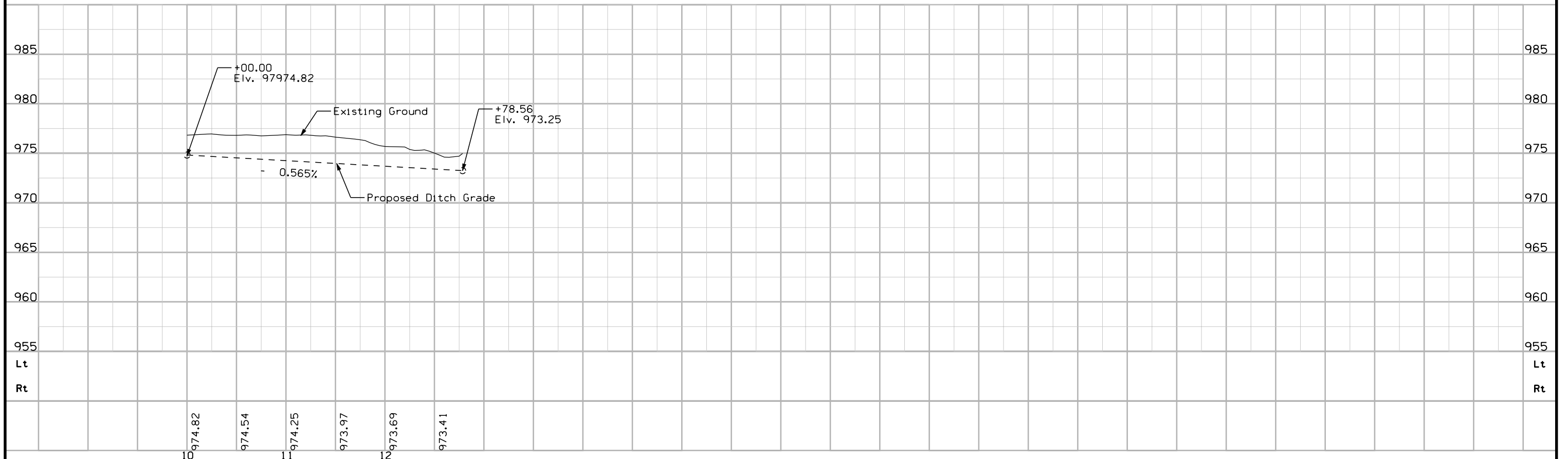
Sta. 1064+70 (LEVEE UNIT 3)
Install 36" x 48' RCP
Lt. = 972.62
F.L. = Rt. 973.25

Sta. 1064+80 (LEVEE UNIT 3)
24" x 57' CMP
DA= 25.6 Ac.
(REMOVE)



Lewis TWP.
T-74N R-43W
SEC. 18

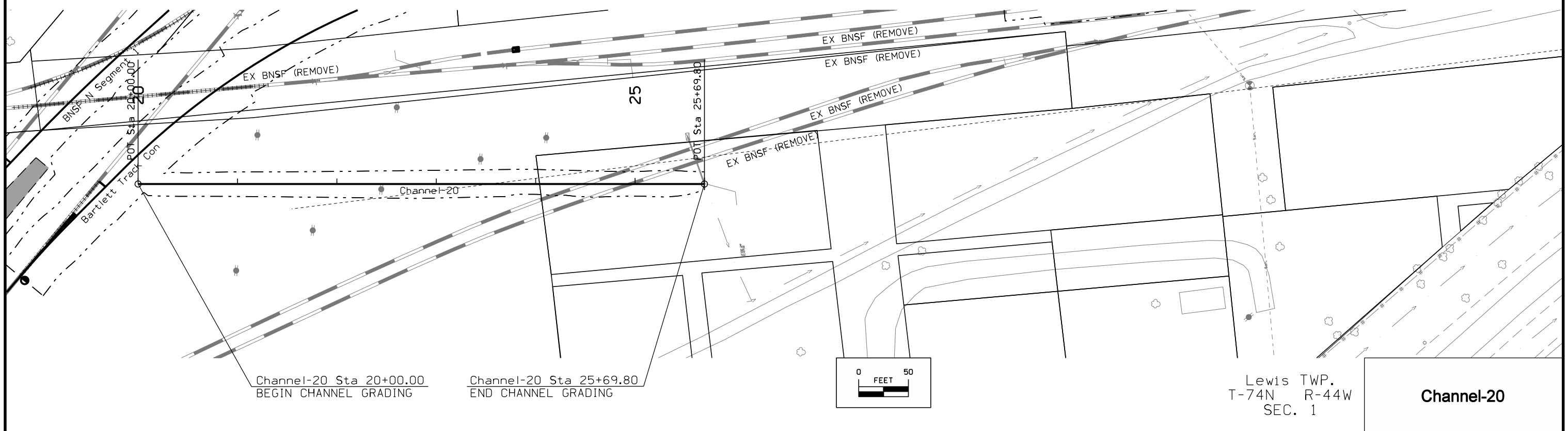
Channel-10



For BNSF N Segment 1 Details
Refer to Sheet No. D.14

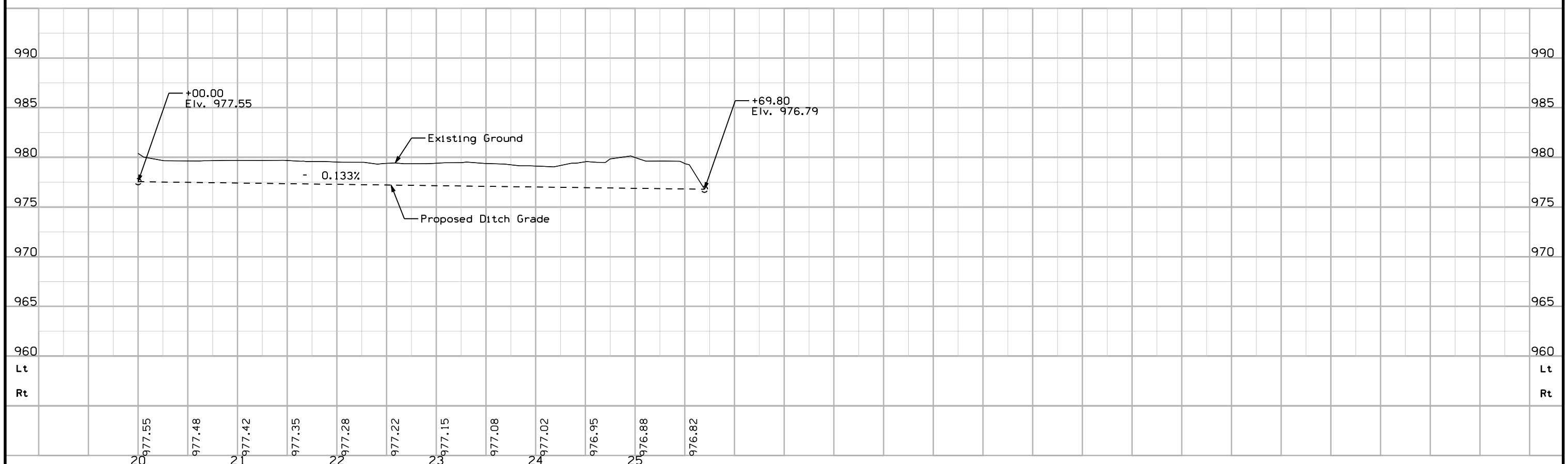
For Bartlett Track Con Details
Refer to Sheets No. D.71 - D.73

For BNSF Existing Trackage Removal
Details Refer to Sheets No. D.17 - D.21



Lewis TWP.
T-74N R-44W
SEC. 1

Channel-20

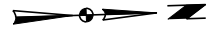


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For Roadway Crossing Signal Details
Refer to Sheet No. N.2

For 12th Ave. Details
Refer to Sheet No. E.2

For BNSF N Seg 2 Details
Refer to Sheet No. D.15



STA. 10013+40.83 8TH ST.
STA. 10020+40.37 12TH AVE.

STA. 10012+33.53 8TH ST.
BEGIN CROSS SLOPE TRANSITION

10012

10013

10014

10015

10016

POT Sta 10010+00.00

EXISTING 8TH ST. (U.A.C.)

CROSS SLOPE TRANSITION

8TH ST.

34°44'14.84"

CROSS SLOPE TRANSITION

CONSTRUCTION

STA. 10013+00.53 8TH ST.
END CROSS SLOPE TRANSITION
BEGIN CONSTRUCTION

PROPOSED BNSF NORTH SEGMENT 2

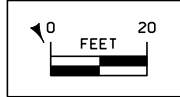
12TH AVE.

STA. 10014+39.55 8TH ST.
END CROSS SLOPE TRANSITION

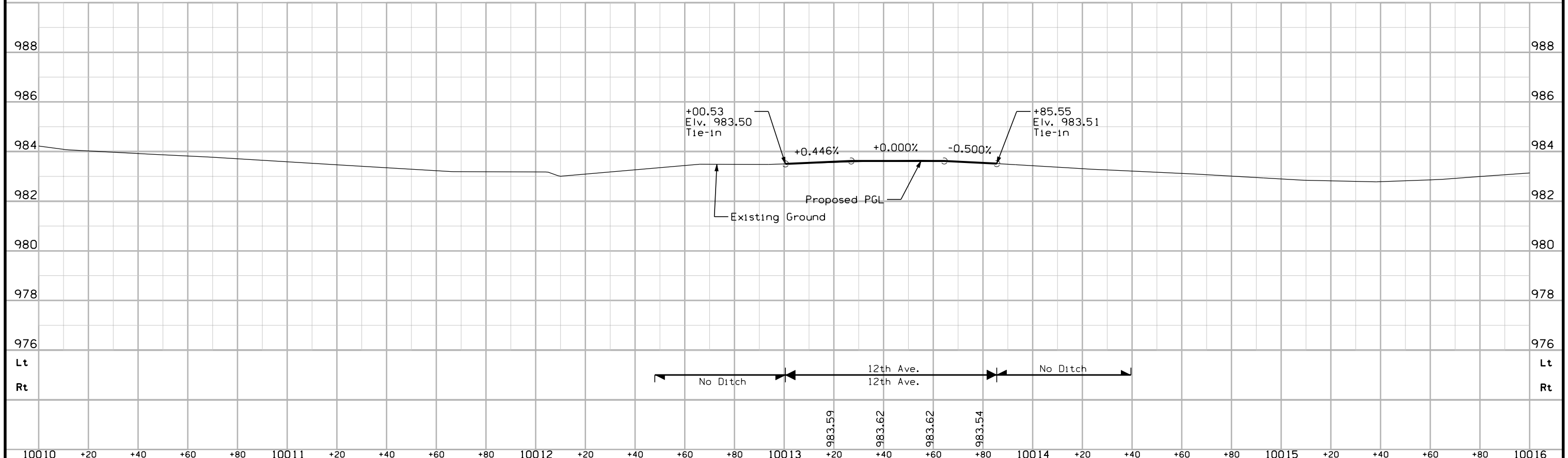
STA. 10013+85.55 8TH ST.
END CONSTRUCTION
BEGIN CROSS SLOPE TRANSITION

STA. 10013+42.06 8TH ST.
STA. 1509+25.98 BNSF N SEG 2

Lewis TWP.
T-74N R-44W
SEC. 36



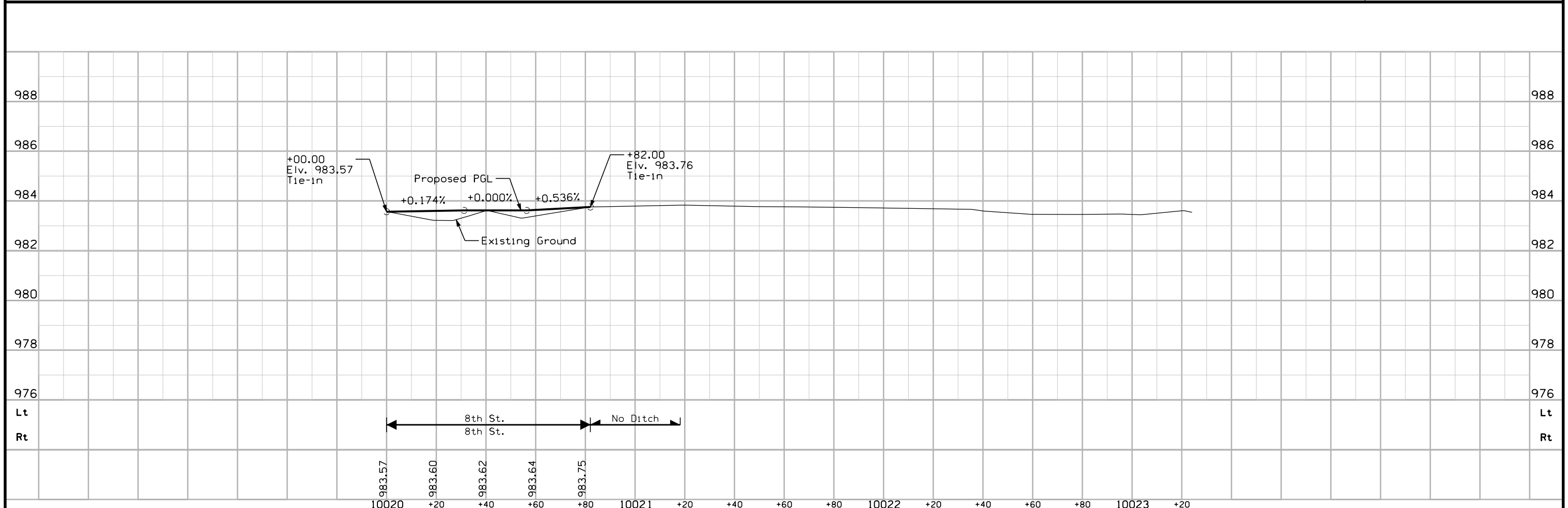
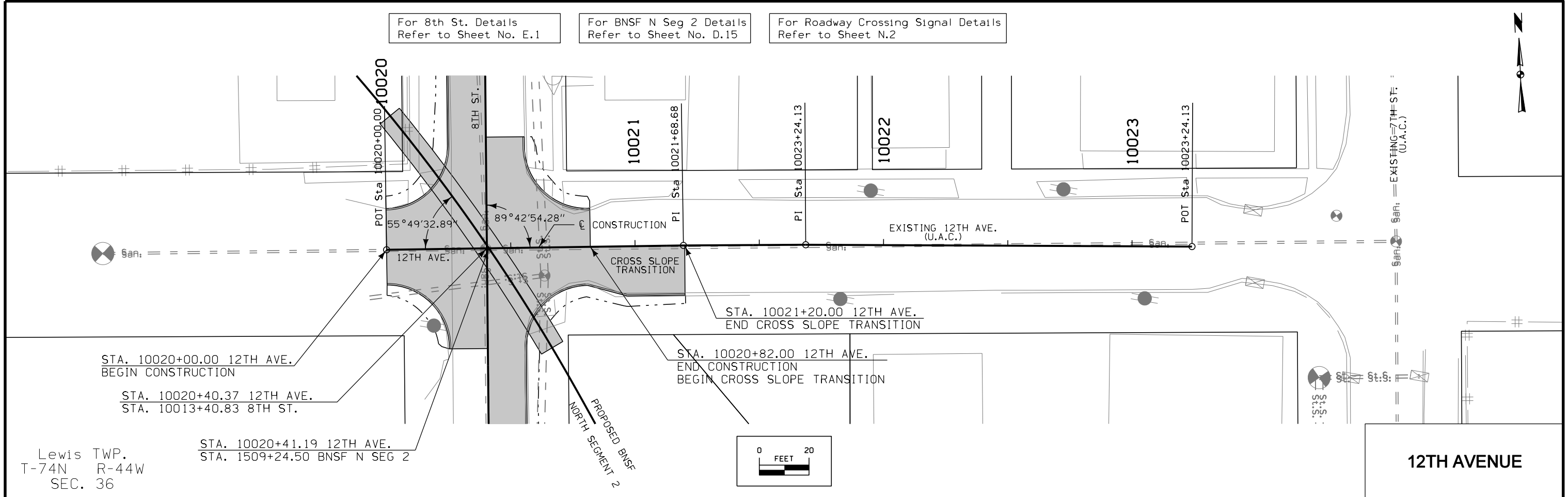
8TH STREET



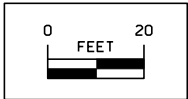
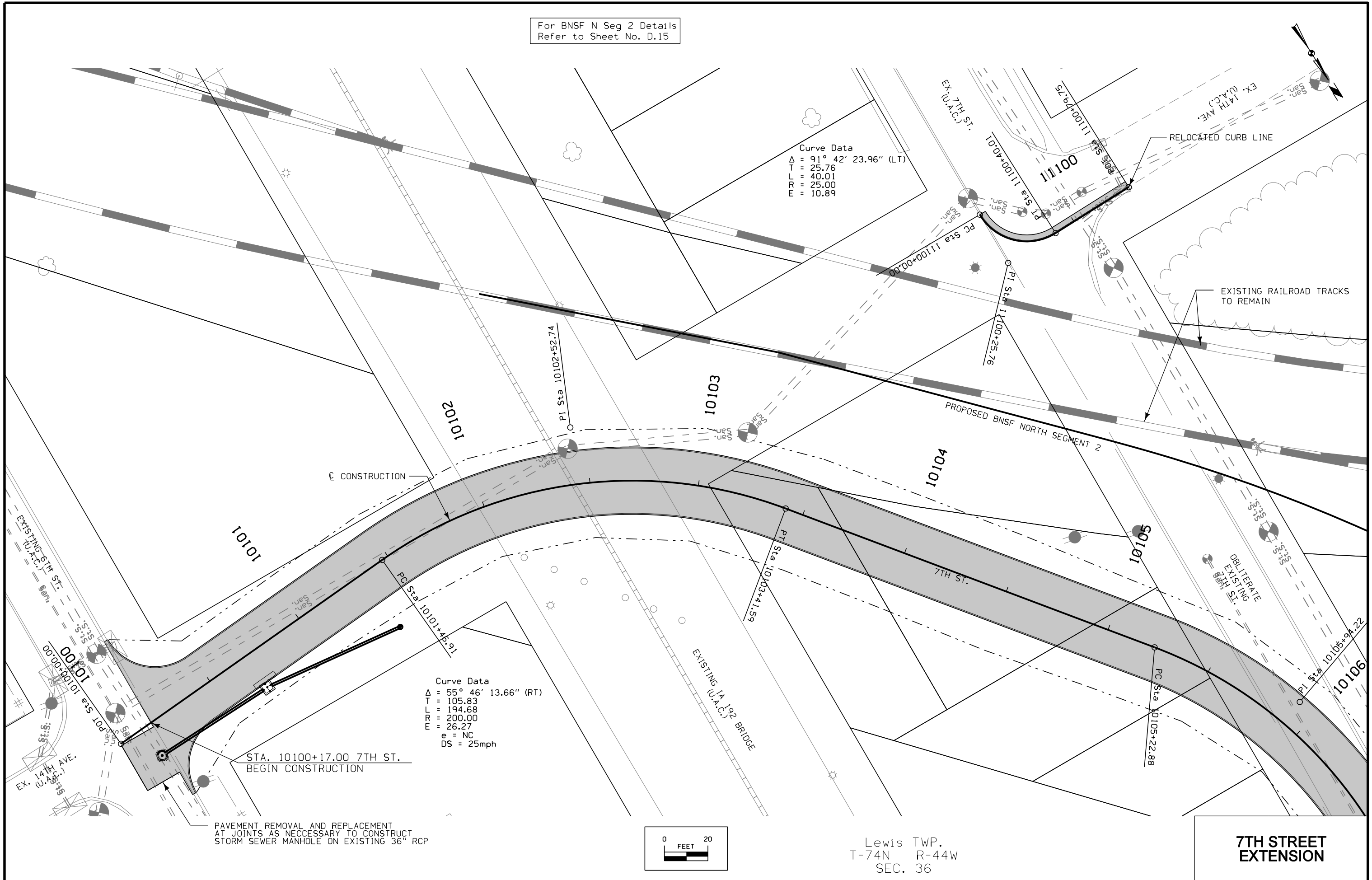
For 8th St. Details
Refer to Sheet No. E.1

For BNSF N Seg 2 Details
Refer to Sheet No. D.15

For Roadway Crossing Signal Details
Refer to Sheet N.2

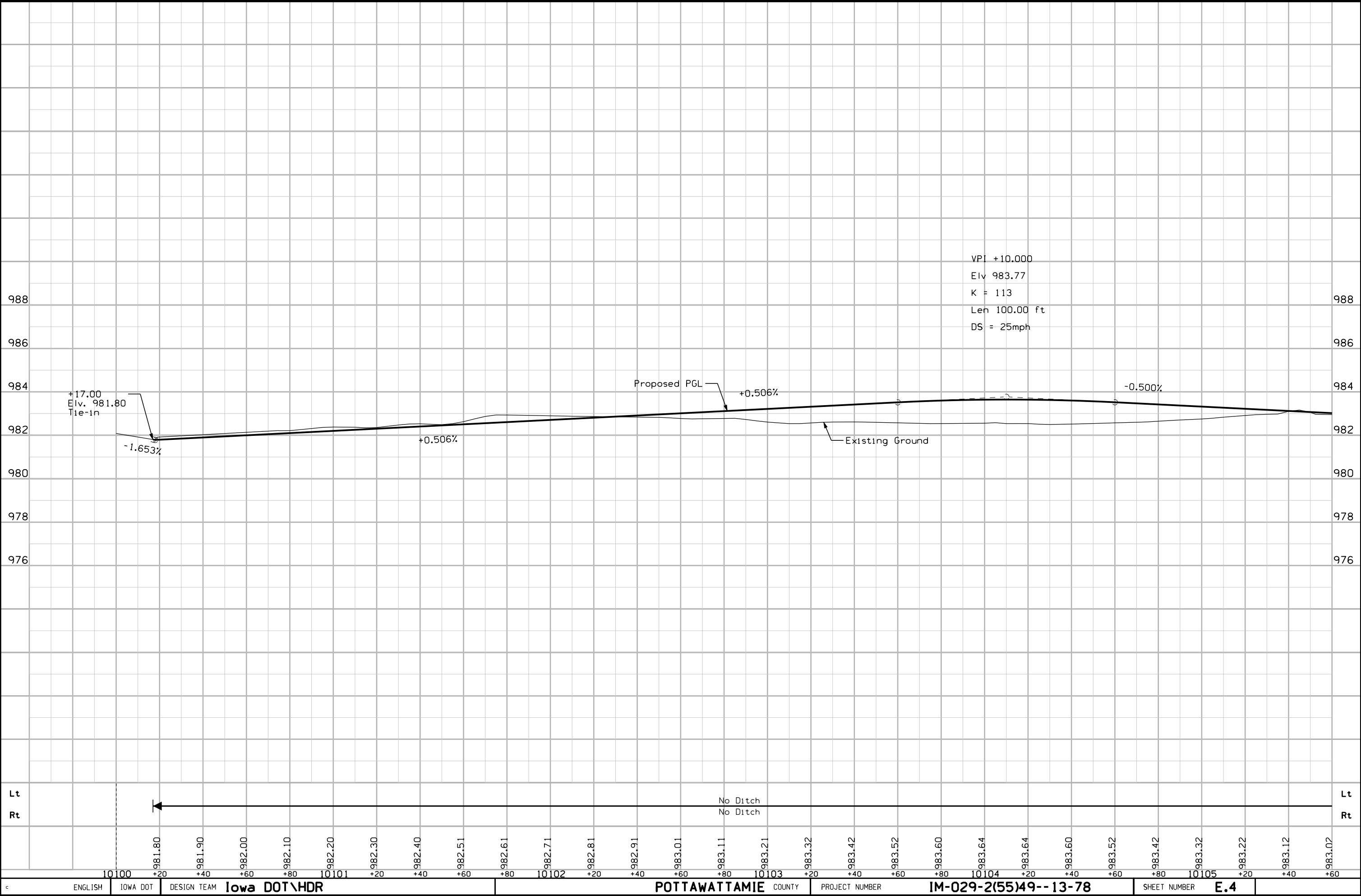


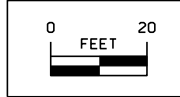
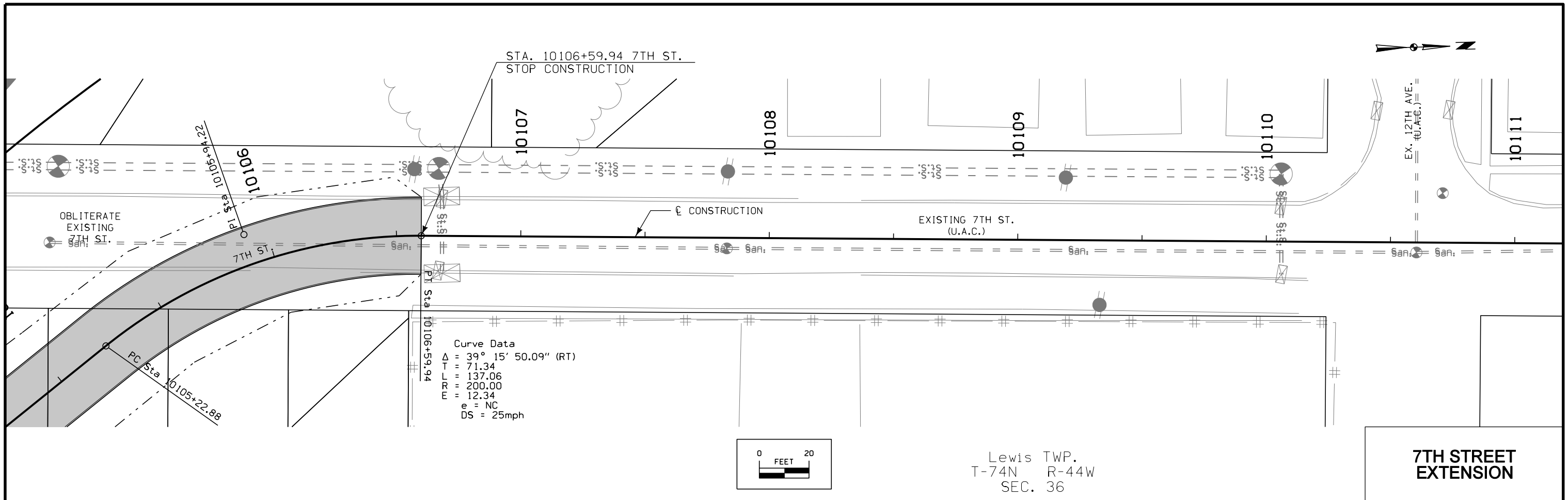
For BNSF N Seg 2 Details
Refer to Sheet No. D.15



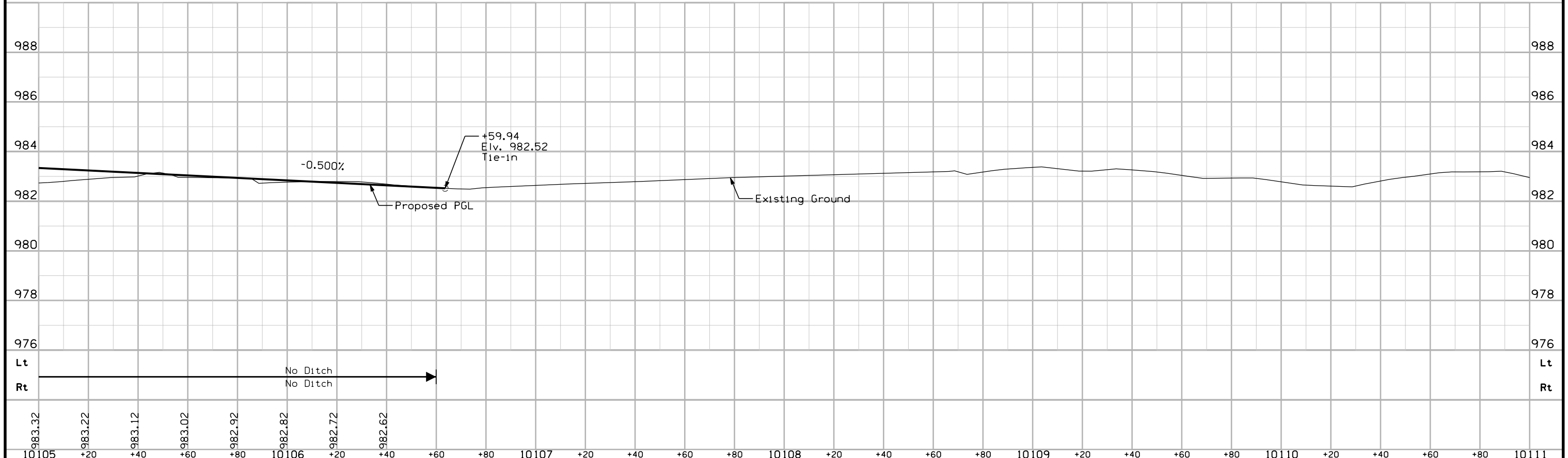
Lewis TWP.
T-74N R-44W
SEC. 36

**7TH STREET
EXTENSION**



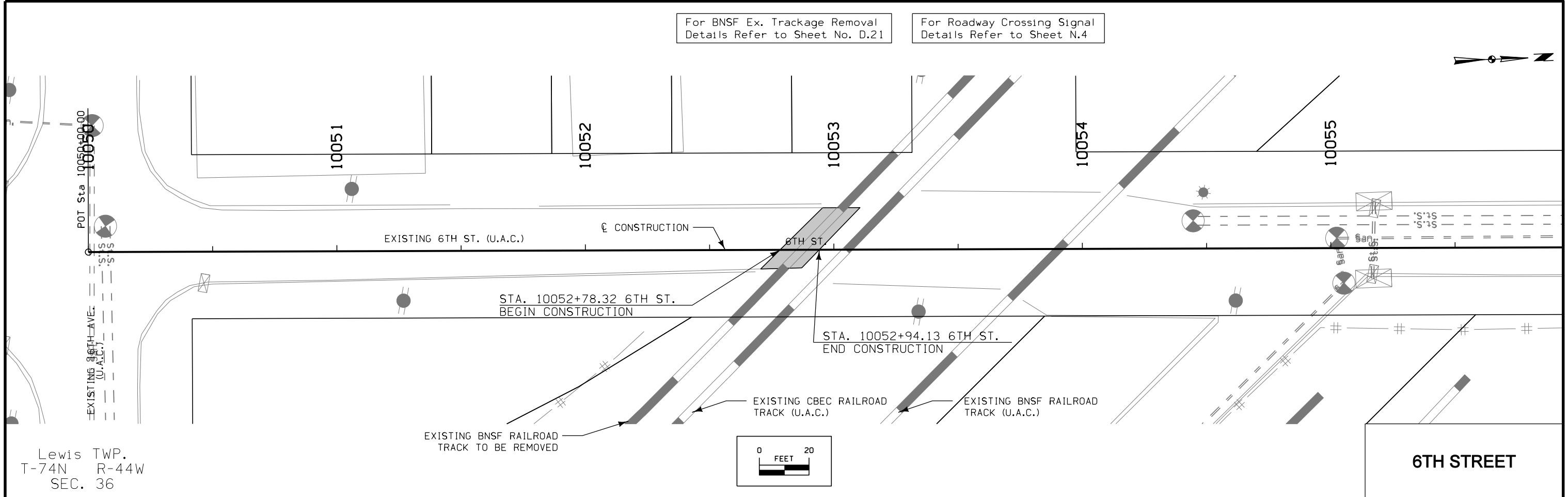
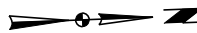


Lewis TWP.
T-74N R-44W
SEC. 36



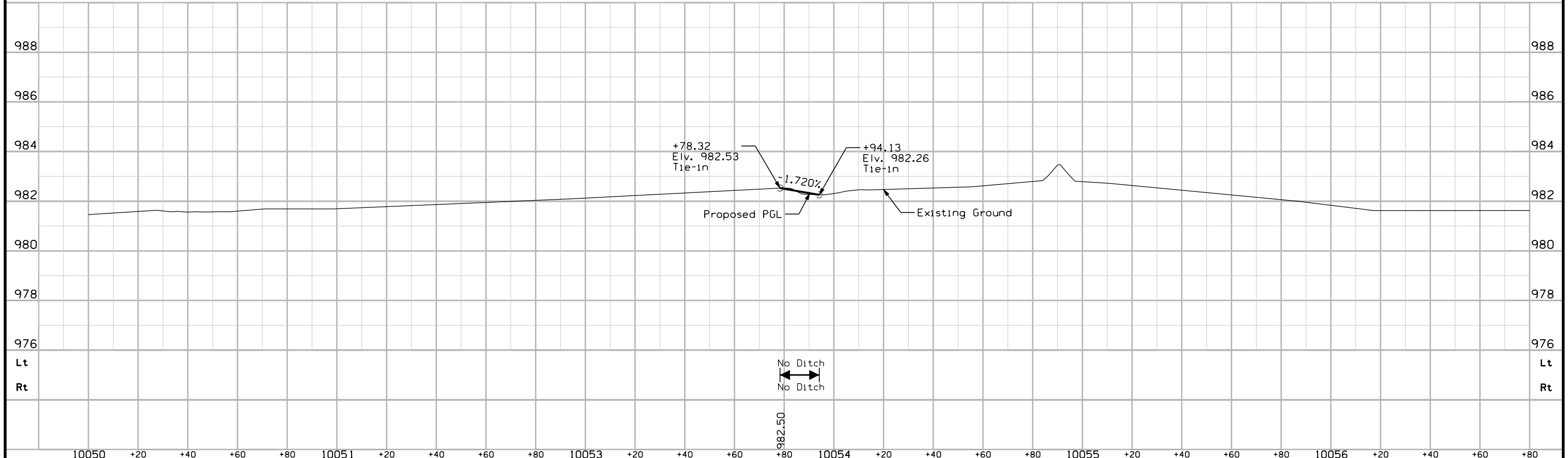
For BNSF Ex. Trackage Removal
Details Refer to Sheet No. D.21

For Roadway Crossing Signal
Details Refer to Sheet N.4



Lewis TWP.
T-74N R-44W
SEC. 36

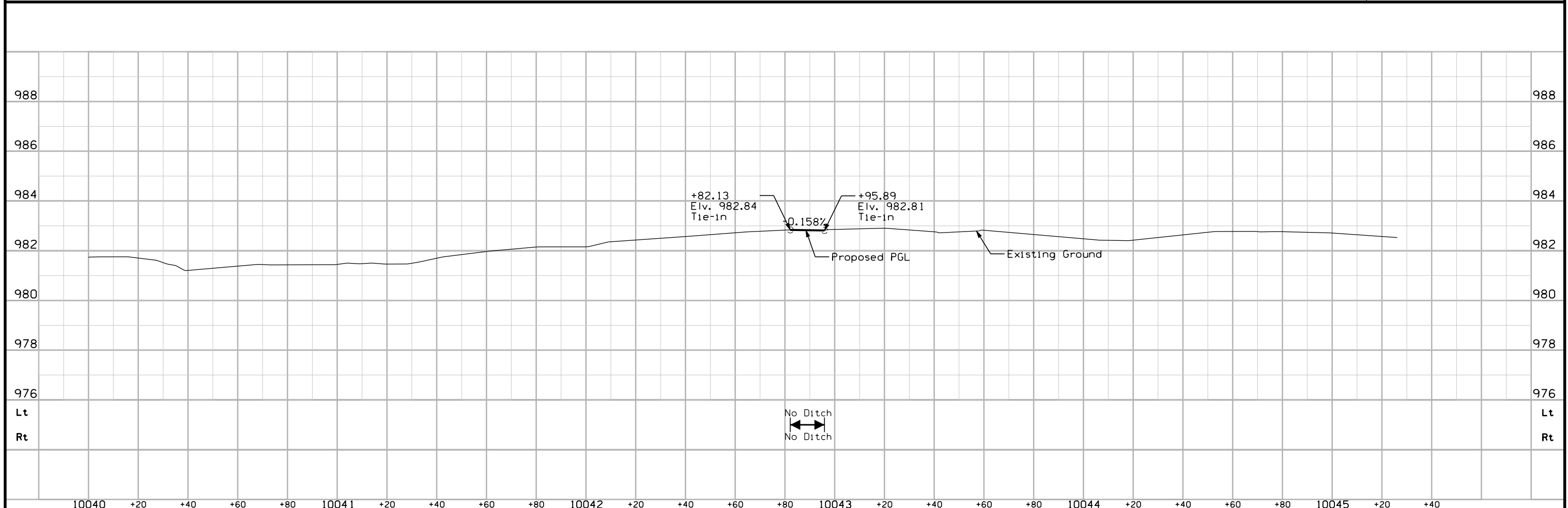
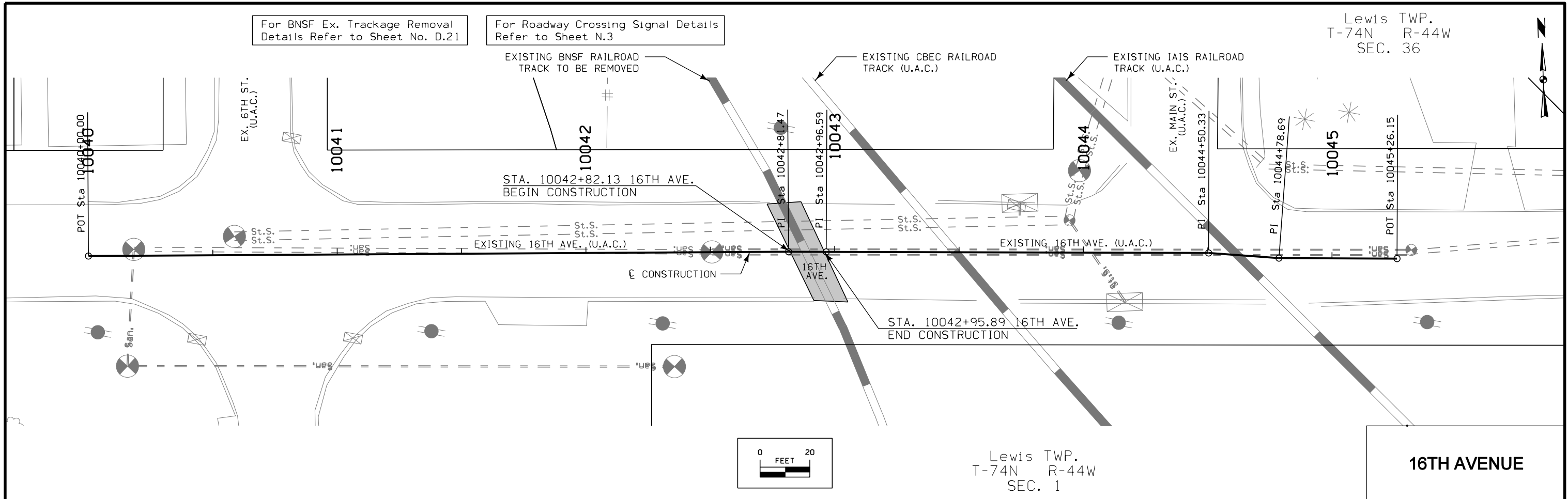
6TH STREET



For BNSF Ex. Trackage Removal
Details Refer to Sheet No. D.21

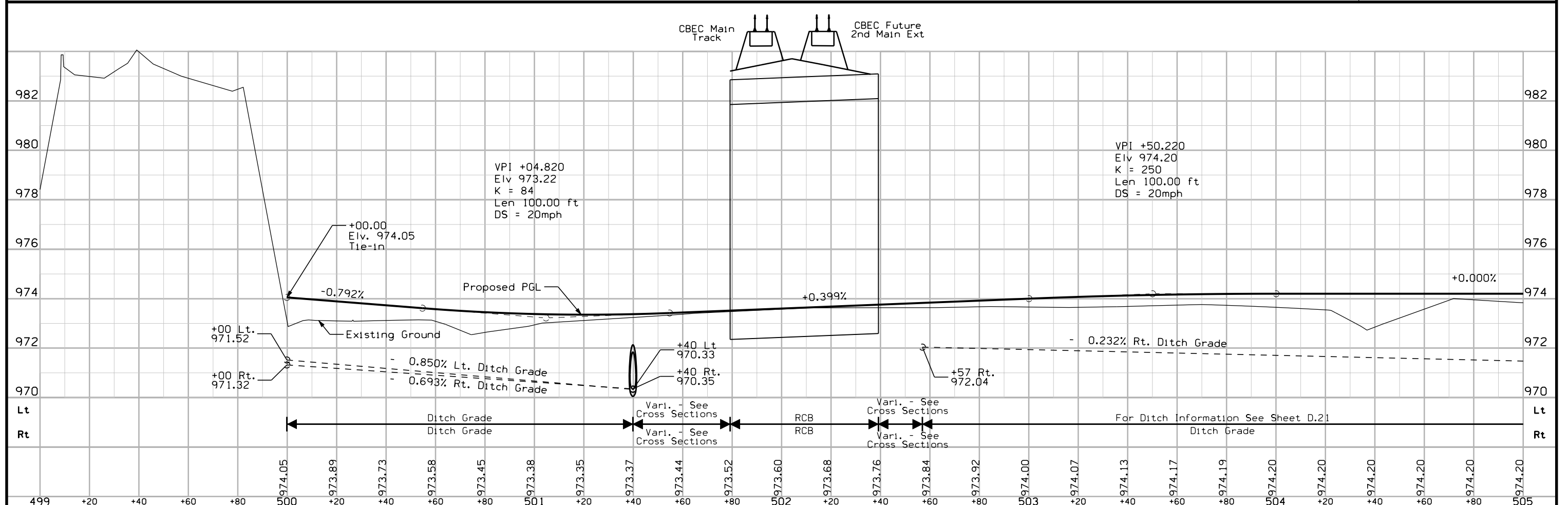
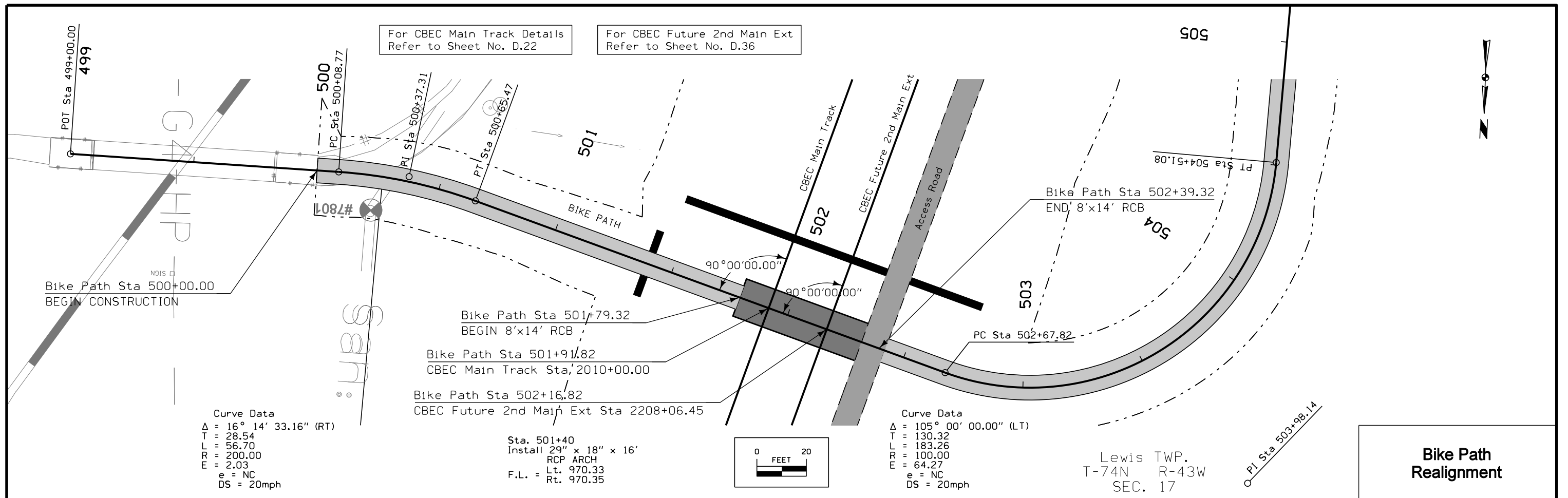
For Roadway Crossing Signal Details
Refer to Sheet N.3

Lewis TWP.
T-74N R-44W
SEC. 36



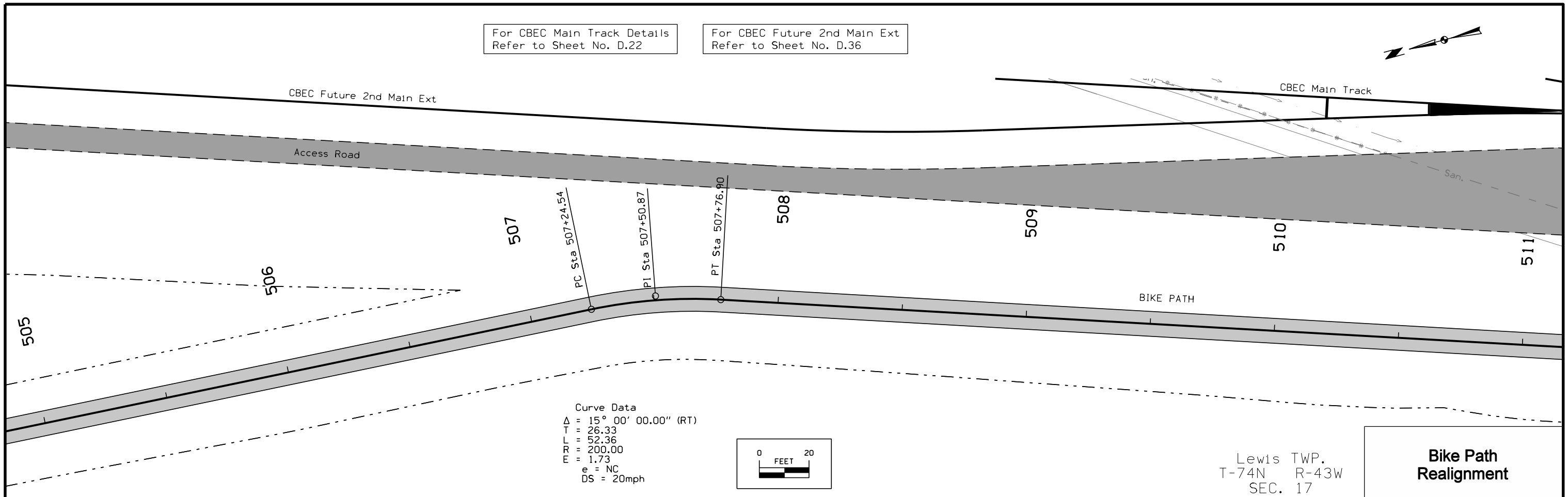
English IOWA DOT DESIGN TEAM IOWA DOT\HDR POTTAWATTAMIE COUNTY PROJECT NUMBER IM-029-2(55)49--13-78 SHEET NUMBER E.7

03:07PM 16-Jun-11 johsmith c:\pwworking\oma\d0445984\CBIS_SEC03_RRE01.dgn

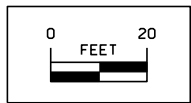


For CBEC Main Track Details
Refer to Sheet No. D.22

For CBEC Future 2nd Main Ext
Refer to Sheet No. D.36

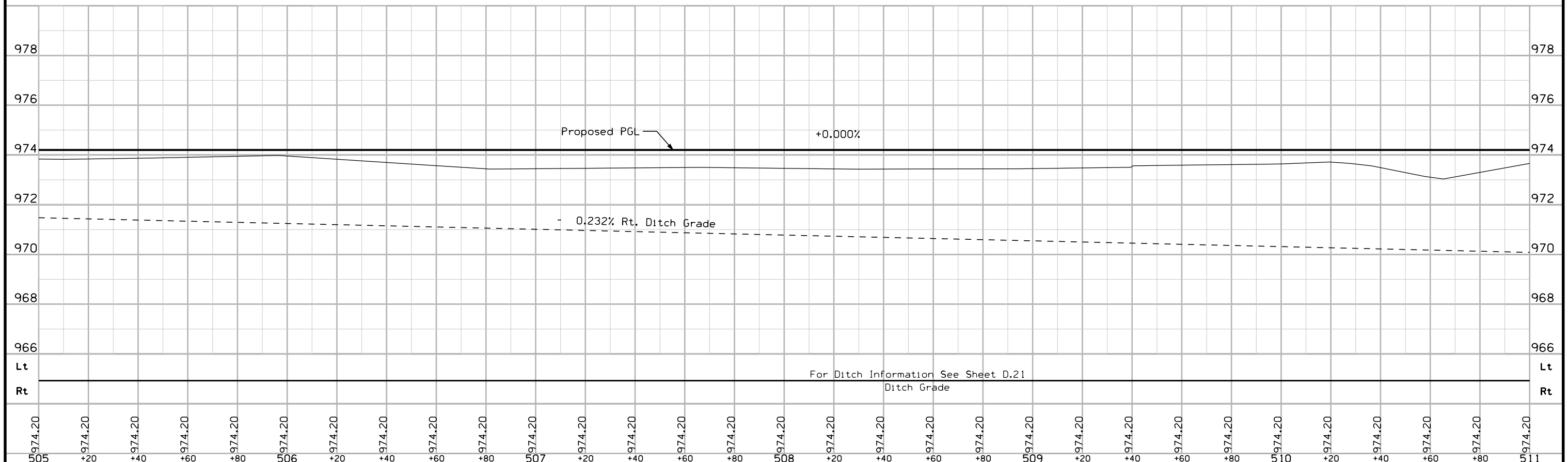


Curve Data
 $\Delta = 15^\circ 00' 00.00''$ (RT)
 $T = 26.33$
 $L = 52.36$
 $R = 200.00$
 $e = 1.73$
 $e = NC$
 $DS = 20\text{mph}$



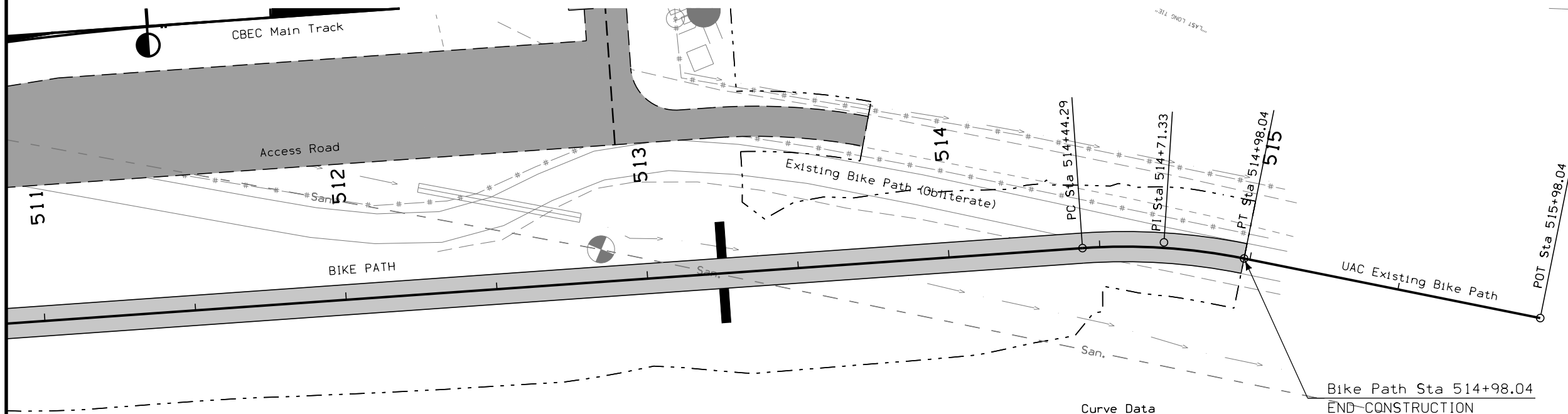
Lewis TWP.
 T-74N R-43W
 SEC. 17

**Bike Path
 Realignment**



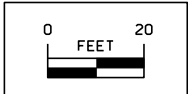
For Ditch Information See Sheet D.21
 Ditch Grade

For CBEC Main Track Details
Refer to Sheet No. D.22



Sta. 512+53, 28' LT
36" x 55' CMP
DA= Ac.
(REMOVE)

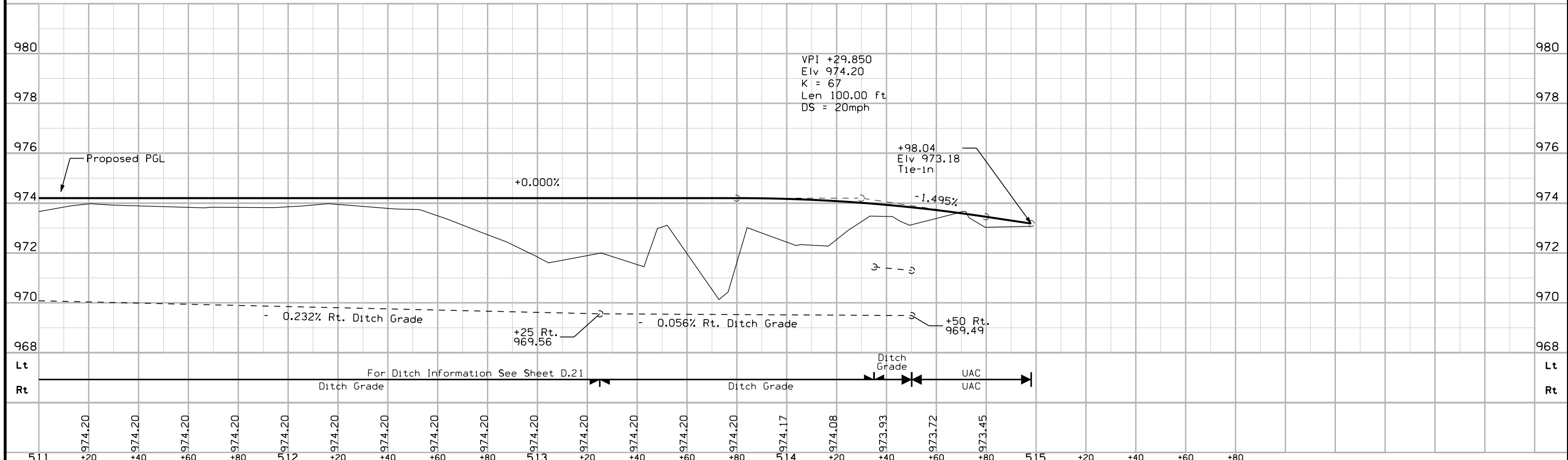
Sta. 513+25
Install 36" x 23' CMP
Lt. 969.58
Rt. 969.56



Curve Data
 $\Delta = 15^\circ 23' 57.28''$ (RT)
 T = 27.04
 L = 53.75
 R = 200.00
 E = 1.82
 e = NC
 DS = 20mph

Lewis TWP.
T-74N R-43W
SEC. 17

**Bike Path
Realignment**



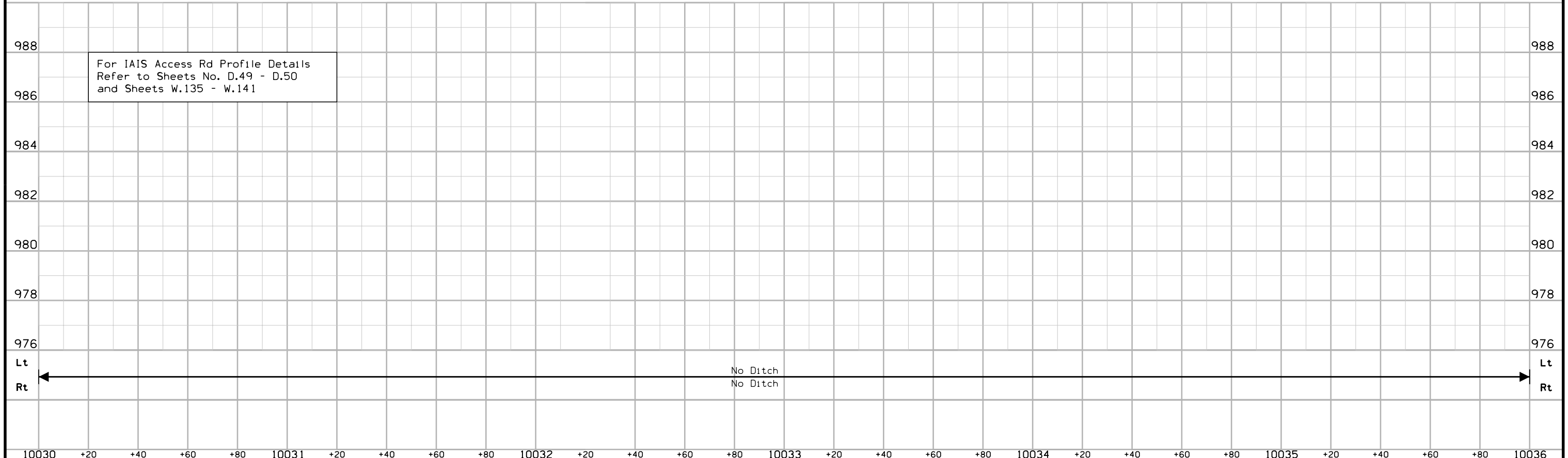
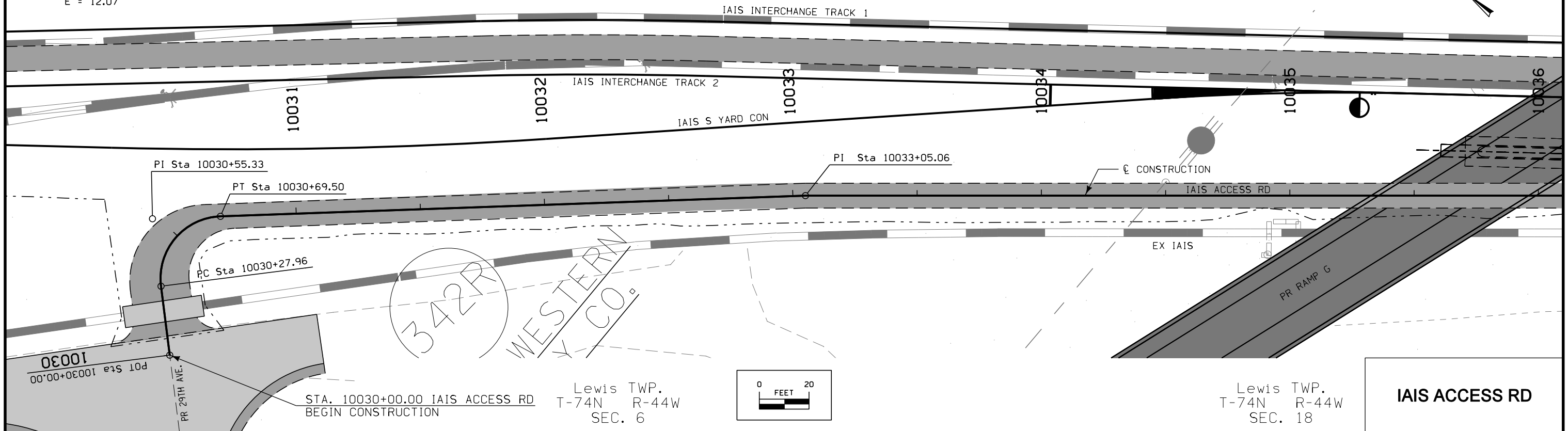
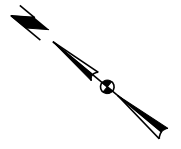
Curve Data
 $\Delta = 95^\circ 11' 10.25''$ (RT)
 T = 27.37
 L = 41.53
 R = 25.00
 E = 12.07

For IAIS Interchange Track 1 Details
 Refer to Sheets No. D.46 - D.50

For IAIS Interchange Track 2 Details
 Refer to Sheets No. D.51 - D.55

For IAIS S Yard Connection Details
 Refer to Sheets No. D.59

For IAIS Ex Track Removal Details
 Refer to Sheets No. D.60 - D.63

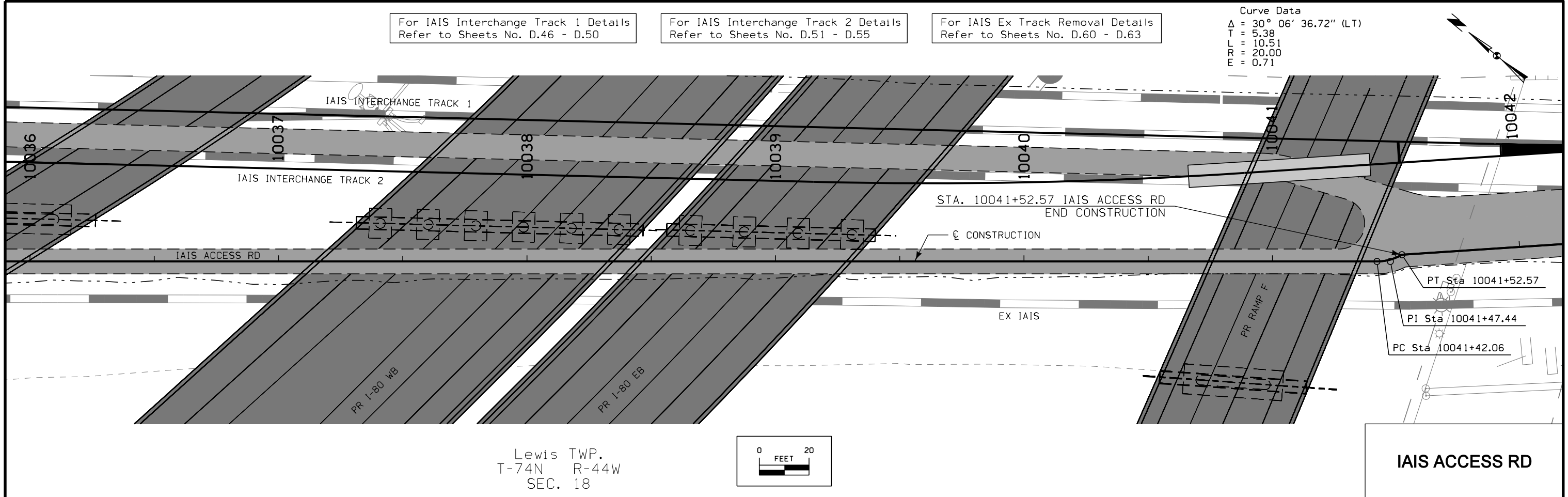


For IAIS Interchange Track 1 Details
Refer to Sheets No. D.46 - D.50

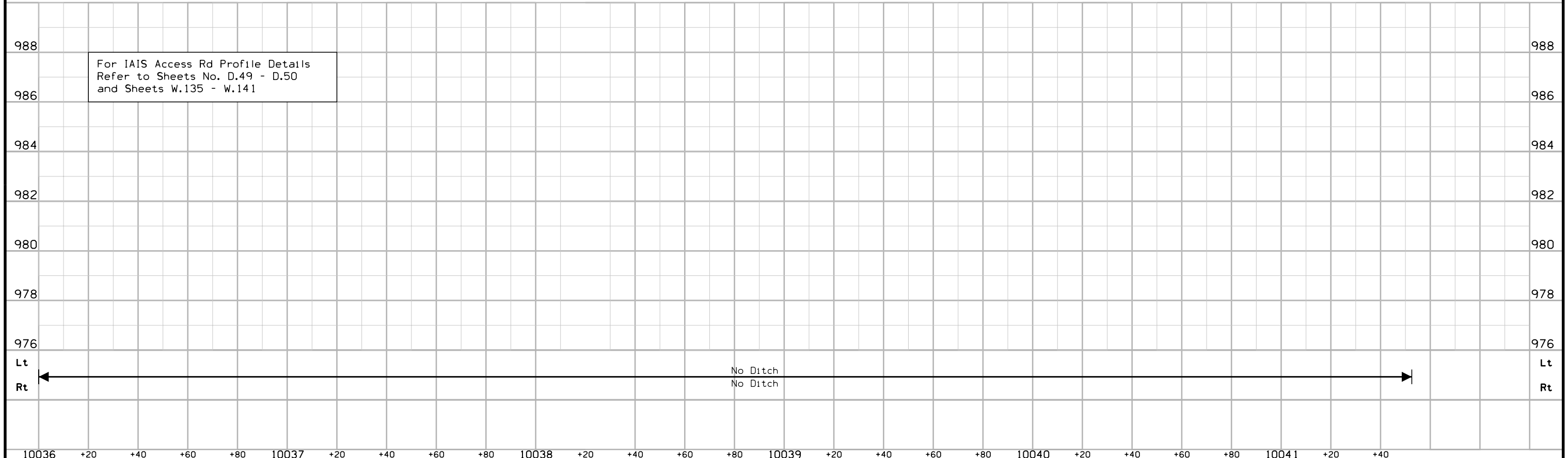
For IAIS Interchange Track 2 Details
Refer to Sheets No. D.51 - D.55

For IAIS Ex Track Removal Details
Refer to Sheets No. D.60 - D.63

Curve Data
 $\Delta = 30^\circ 06' 36.72''$ (LT)
 T = 5.38
 L = 10.51
 R = 20.00
 E = 0.71



For IAIS Access Rd Profile Details
Refer to Sheets No. D.49 - D.50
and Sheets W.135 - W.141



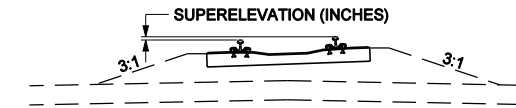
WEDGE COURSE FOR SUPERELEVATED CURVES

101-8
MODIFIED

See RR-25

NOTE: RAILROAD HORIZONTAL CURVES ARE BASED ON THE CHORD DEFINITION.

P.I. Station	Radius FT	Existing		Proposed			HMA Wedge TONS	Shldr. Fill Incl. 60% Shrink CY	Remarks
		e	L+X	V	e	L+X			
		%	FT	MPH		FT			
1006+12.73				30	1-7/8"	70.00'			BNSF-S1
1030+49.22				30	3/4"	40.00'			BNSF-S2
1068+94.53				30	3/4"	40.00'			BNSF-S3
1110+61.58				30	3/4"	40.00'			BNSF-W1-1
1126+58.43				30	3/4"	40.00'			BNSF-W1-2
1209+69.01				30	1-1/2"	60.00'			BNSF-W2-1
1401+55.33				10	3/4"	40.00'			BNSF-N1-1
1405+67.09				10	3/4"	40.00'			BNSF-N1-2
1503+12.73				10	3/4"	40.00'			BNSF-N2-1
1512+99.79				10	3/4"	40.00'			BNSF-N2-2
2013+90.62				30	3/4"	40.00'			CBEC-T1-1
2024+44.11				30	1-7/8"	70.00'			CBEC-T1-2
2045+65.60				30	3/4"	40.00'			CBEC-T1-3
2076+46.41				30	3/4"	40.00'			CBEC-T1-4
2118+59.80				30	3/4"	40.00'			CBEC-T2-2
2149+72.31				30	3/4"	40.00'			CBEC-T2-6
2211+92.50				30	3/4"	40.00'			CBEC-T2E-2
2222+43.43				30	1-7/8"	70.00'			CBEC-T2E-3

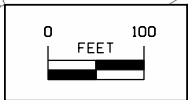


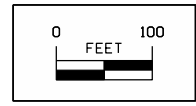
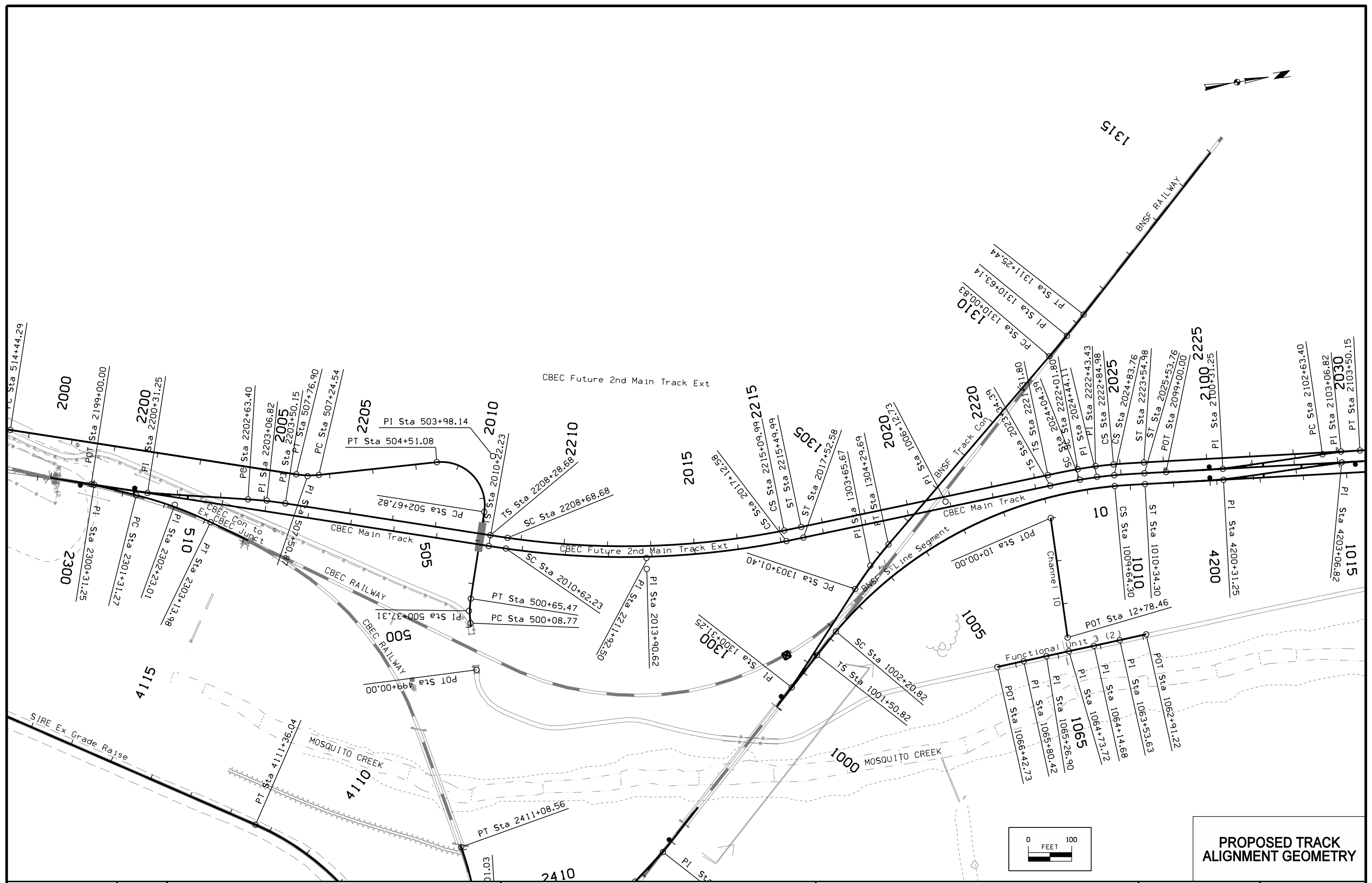
SUPERELEVATION DETAIL

PGL ELEVATION = LOW TOP OF RAIL ELEVATION
 FULL SUPERELEVATION THROUGH FULL BODY OF CURVE
 SUPERELEVATION RUNOFF IN SPIRALS

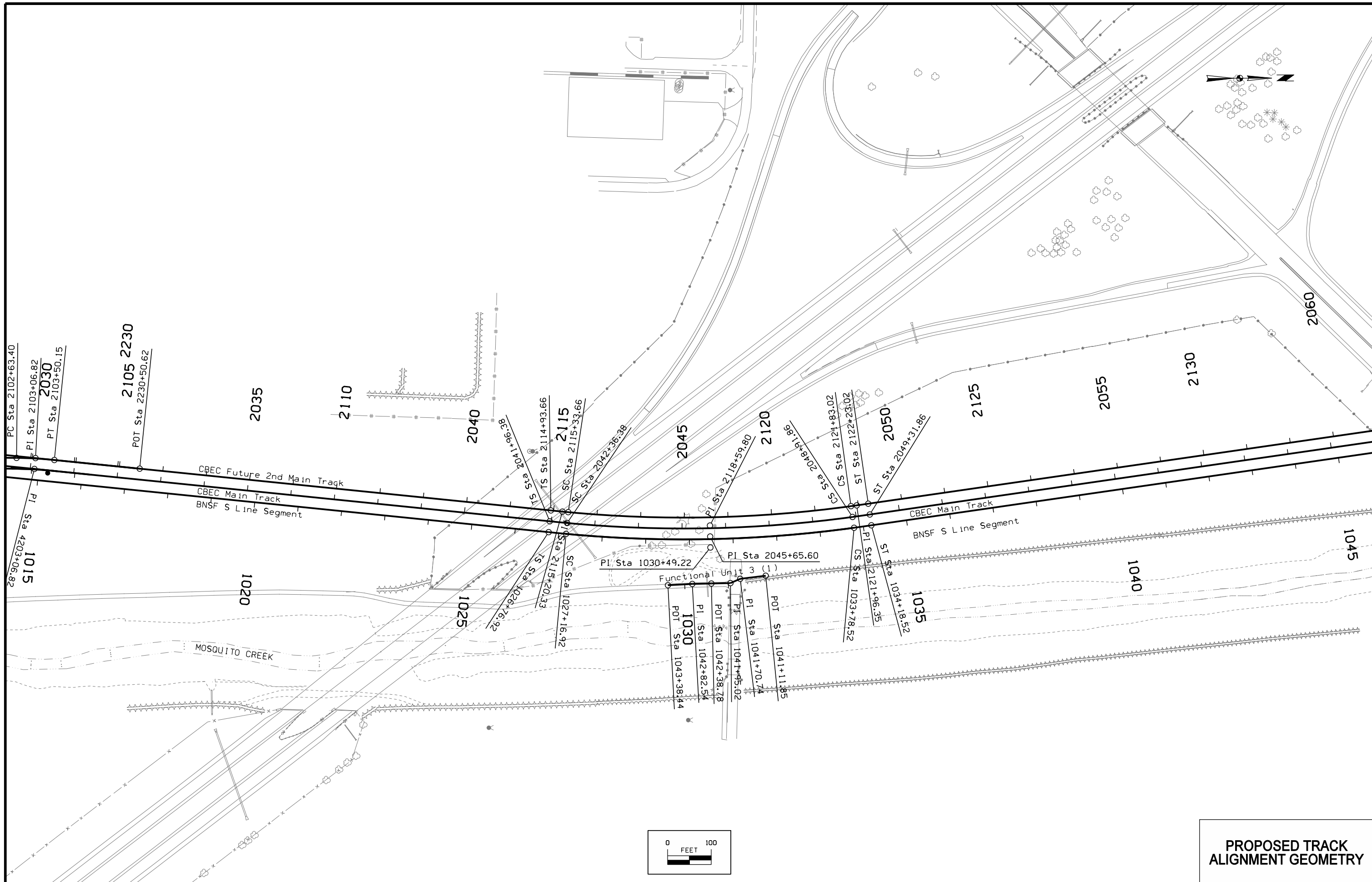


PROPOSED TRACK ALIGNMENT GEOMETRY

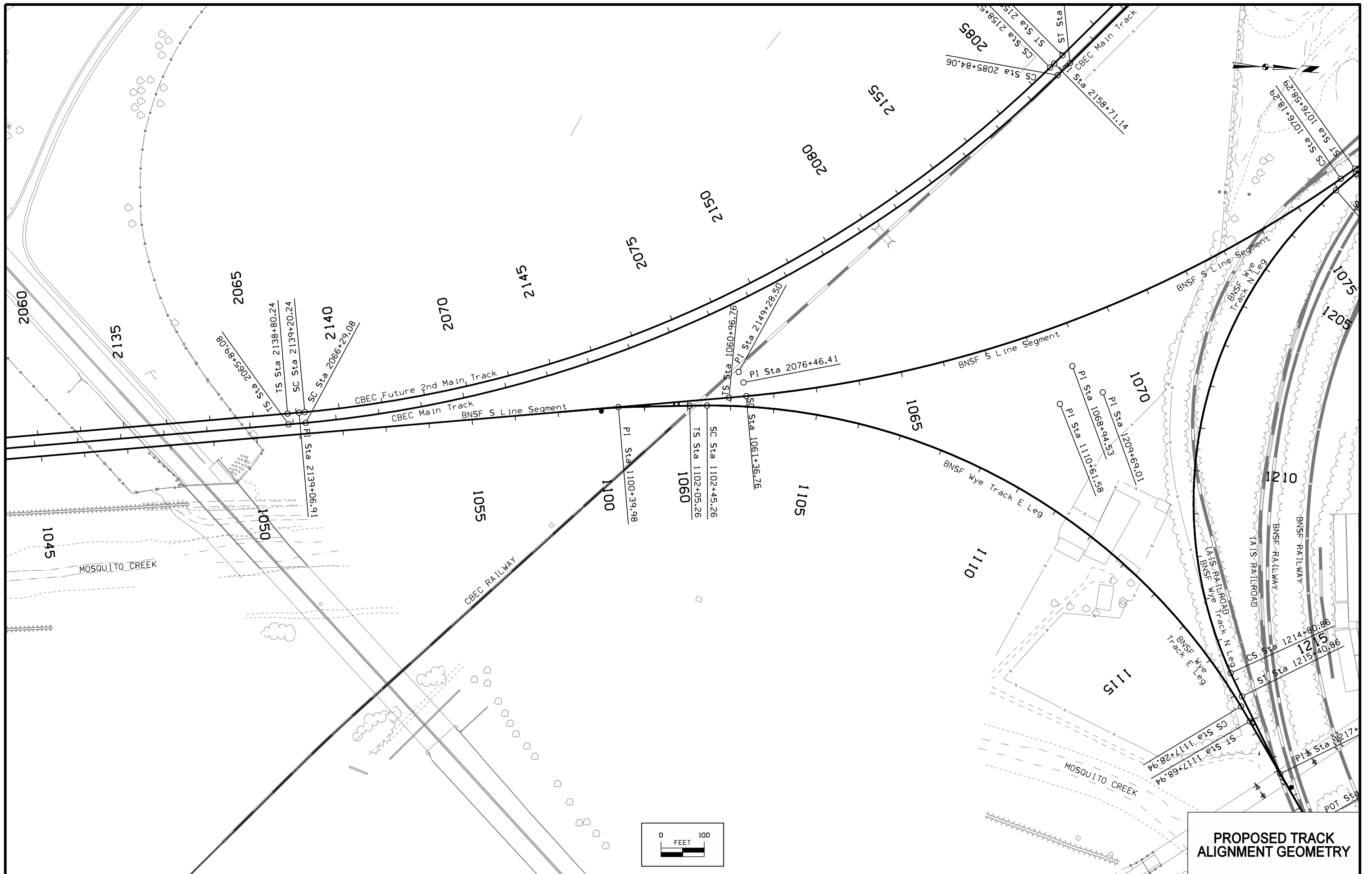


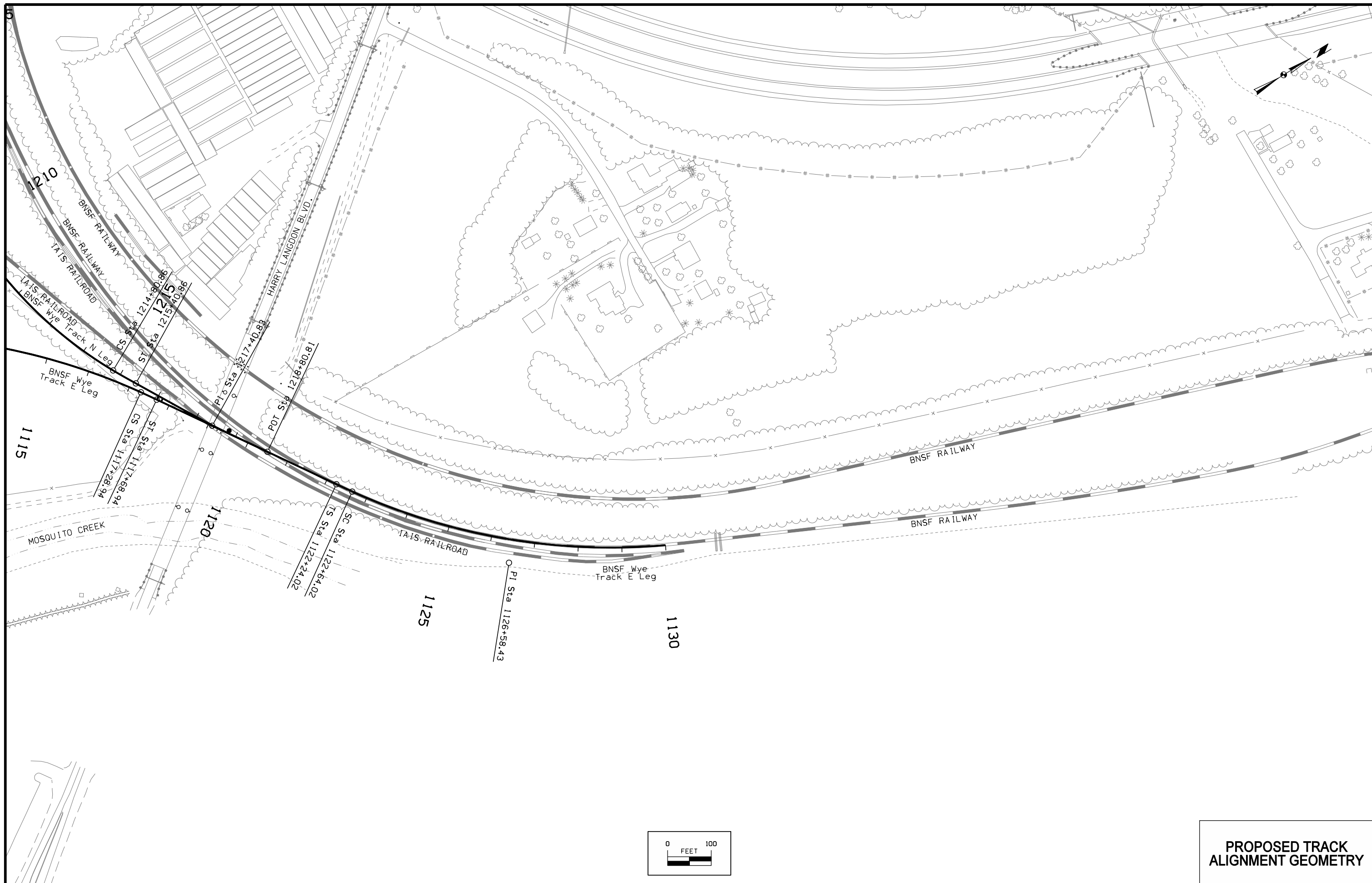


**PROPOSED TRACK
ALIGNMENT GEOMETRY**



**PROPOSED TRACK
ALIGNMENT GEOMETRY**

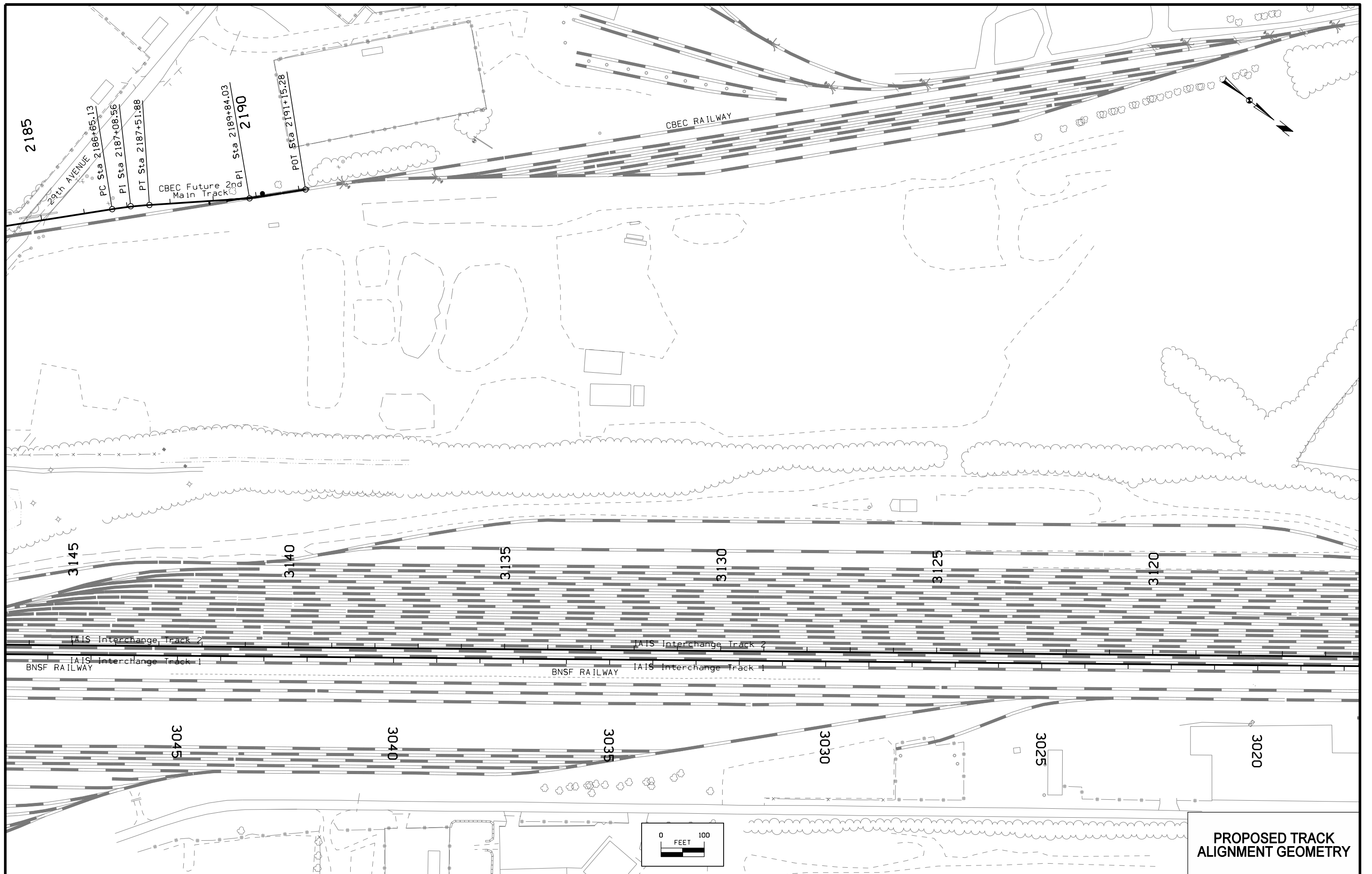




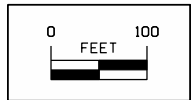
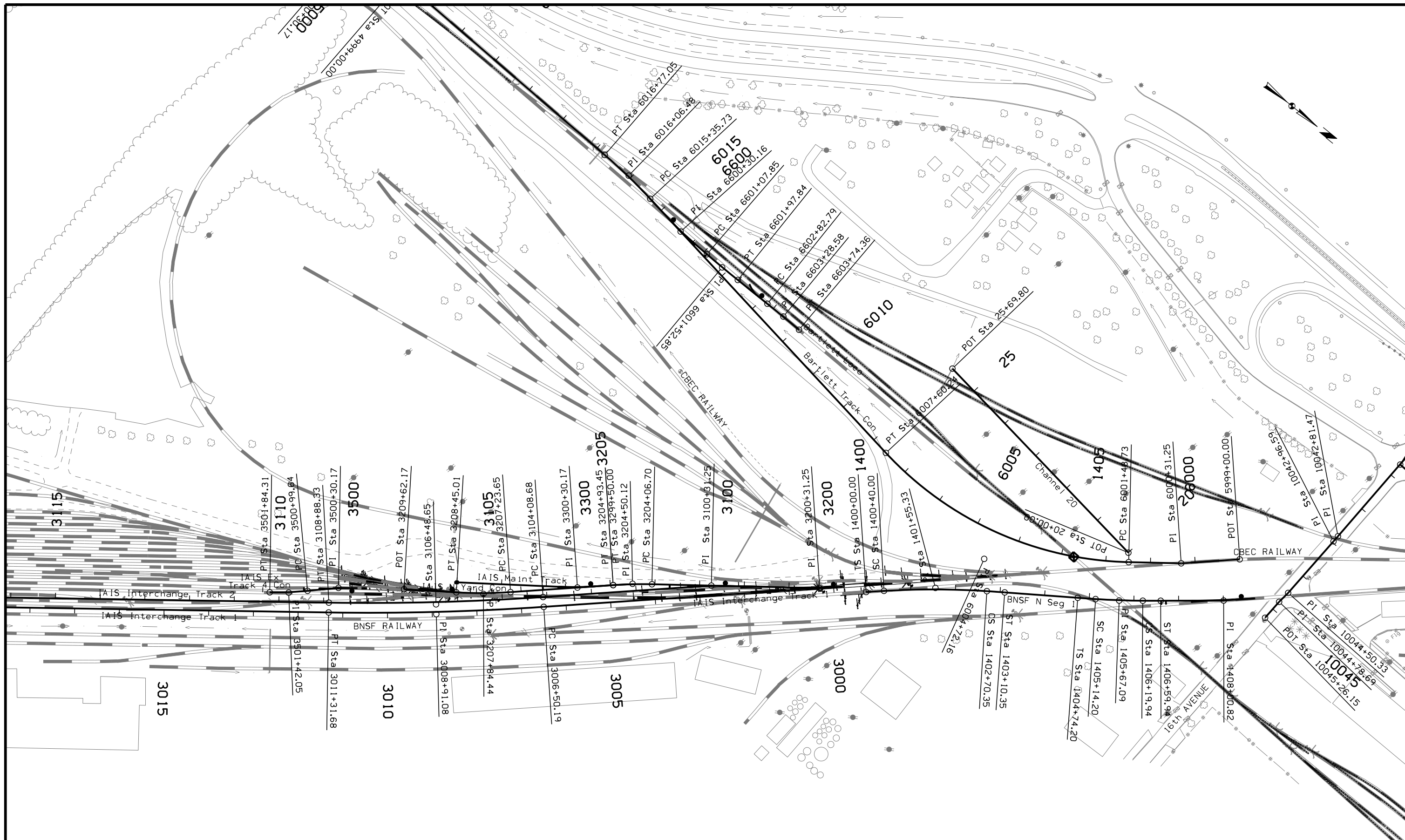
**PROPOSED TRACK
ALIGNMENT GEOMETRY**



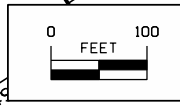
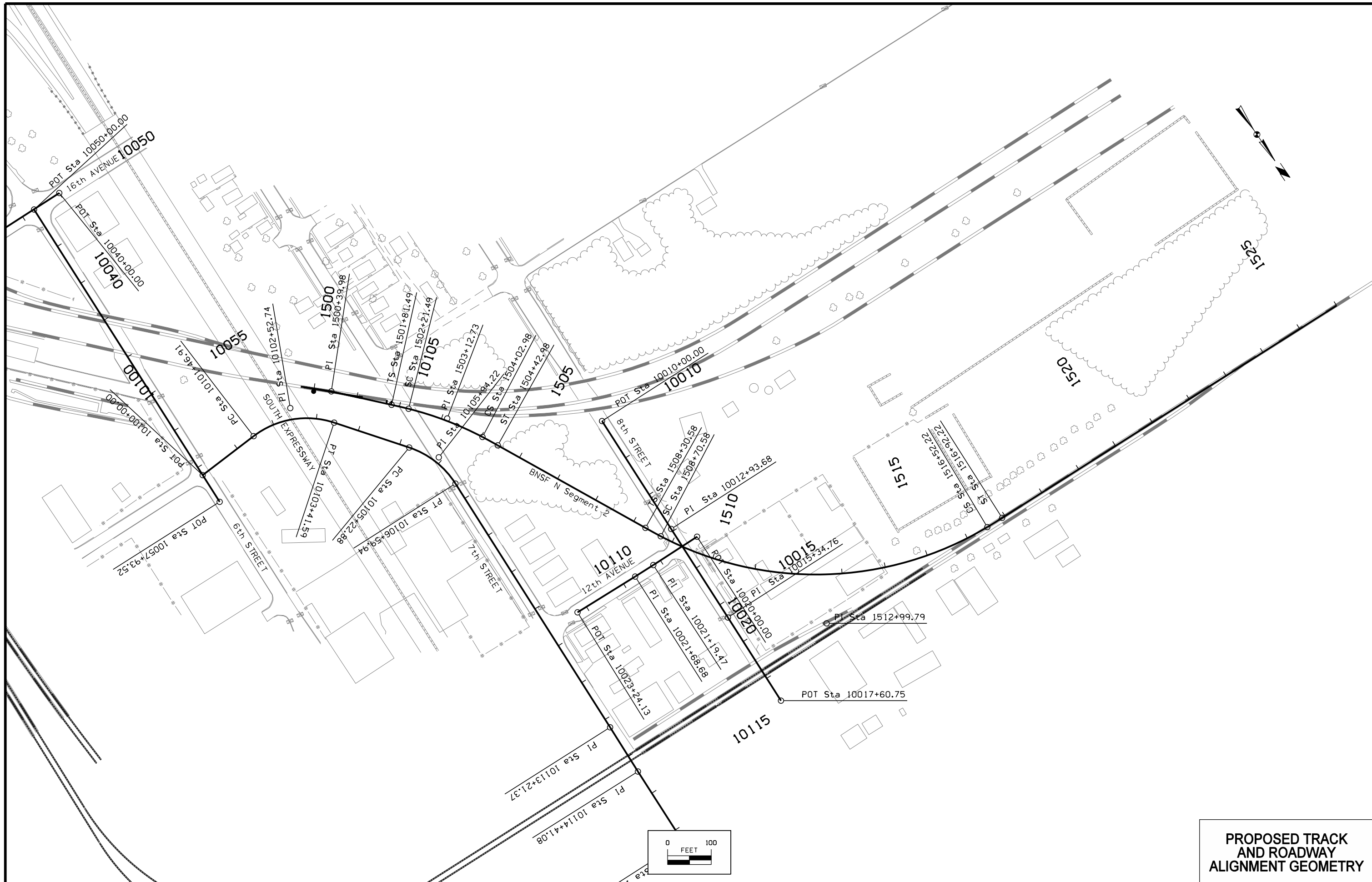
PROPOSED TRACK ALIGNMENT GEOMETRY



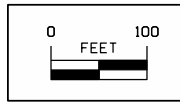
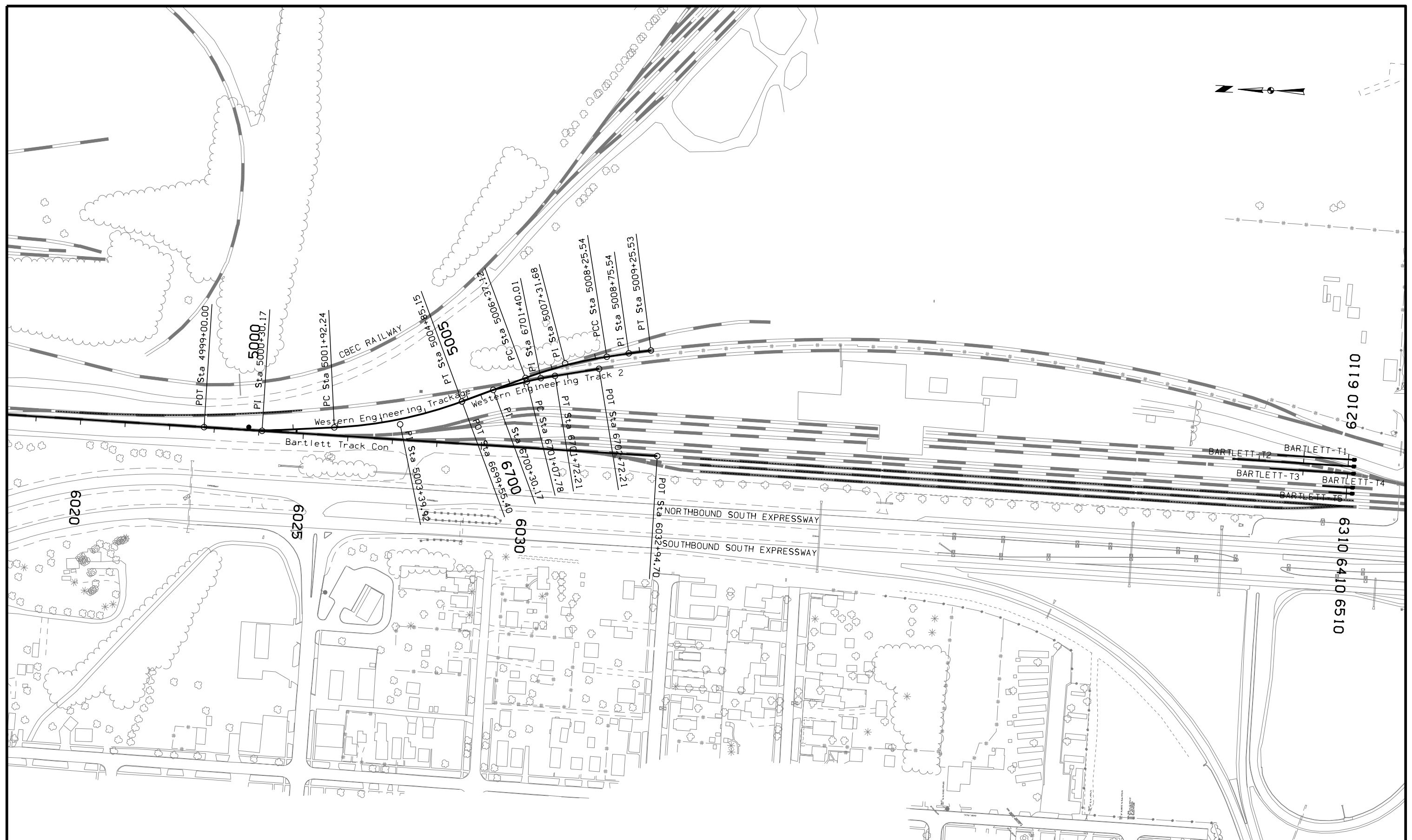
**PROPOSED TRACK
ALIGNMENT GEOMETRY**



**PROPOSED TRACK
ALIGNMENT GEOMETRY**



**PROPOSED TRACK
AND ROADWAY
ALIGNMENT GEOMETRY**



**PROPOSED TRACK
ALIGNMENT GEOMETRY**

HORIZONTAL DATUM 2000 SURVEY

HORIZONTAL DATUM IS RELATIVE TO NAD83 (1996) THIS SURVEY IS A RETRACE OF PRESENT I-80 & I-29,GPS SURVEY IN ENGLISH UNITS.

STATIONING FOR I-29 SURVEY WAS OBTAINED FROM S.T. STA 206+15.89 I-IG-80-(54)2- - 04-78 ASBUILT PLANS. THIS STATIONING WAS CARRIED NORTHERLY & WESTERLY TO E.O.P AT NEBRASKA AVE.

STATIONING FOR I-80 EAST WAS OBTAINED FROM STA 4271+90.00 I-IG-80-1(54)2-04-78 ASBUILT PLANS. THIS STATIONING WAS CARRIED EASTERLY TO E.O.P

STATIONING FOR I-80 WEST WAS OBTAINED FROM P.I. STA 7432+60.60 I-80-1(53)0- - 01-78 ASBUILT PLANS. THIS STATIONING WAS BACKED WESTERLY TO MISSOURI RIVER BRIDGE.

EQUATIONS FOLLOW :

S.T. STA 206+15.89 I-29 SURVEY =
S.T. STA 206+15.89 I-IG-80-1(54)2- - 04-78 ASBUILT PLANS

POT STA 271+90.50 I-29 SURVEY =
POT STA 271+90.00 I-IG-80-1(54)2-04-78 ASBUILT PLANS =
PI STA 4271+90.00 I-80 EAST SURVEY

PI STA 431+38.21 I-29 SURVEY =
PI STA 432+60.60 I-80-1(53)0- - 01-78 ASBUILT PLANS =
PI STA 7432+60.60 I-80 WEST SURVEY

I-29 NORTH HORIZONTAL DATUM 2001 SURVEY

THIS 2001 SURVEY IS A CONTINUATION OF I-29 2000 SURVEY AND IS A RETRACE OF PRESENT I-29 NORTHERLY, EXCEPT TWO NEW P.I.'S WERE ESTABLISHED AT INTERSTATE 480 INTERCHANGE TO TAKE OUT TWO LATERALS IN EXISTING ALIGNMENT. STATIONING WAS OBTAINED FROM POT STA 471+99.749 2000 SURVEY. THIS STATIONING WAS CARRIED TO EOP.

EQUATIONS FOLLOW:

PN:29 POT STA 471+99.749 THIS SURVEY =
POT STA 471+99.749 IM-80-1(257)1-13-78 2000 SURVEY

PN:112 PI STA 483+63.803 THIS SURVEY =
PI STA 484+85.0 I-IG-29-3(5)54-04-78 ASBUILT PLANS

PN:113 POT STA 494+81.156 THIS SURVEY =
POT STA 496+01.85 I-IG-29-3(5)54-04-78 ASBUILT PLANS =
POT STA 233+00 I-IG-29-3(17)54-04-78 ASBUILT PLANS

PN:119 CN STA 576+76.226 - 131.394 RT THIS SURVEY =
OLD POC STA 152+00 CL MEDIAN I-29-3(6)56-78-24
ASBUILT PLANS

PN:121 CP STA 591+18.767 THIS SURVEY =
POT STA 667+39.4 I-IG-29-3(8)57-04-78 ASBUILT PLANS =
POT STA 137+36.35 HOWARD,NEEDLES,TAMMEN &
BERGENDOFF SURVEY

PN:135 CP STA 701+43.667 -0.075 LT THIS SURVEY =
POT STA 777+64.19 BACK =
POT STA 776+95.47 AHEAD I-IG-29-3(8)57-04-78
ASBUILT PLANS

PN:139 CN STA 724+16.133 THIS SURVEY =
ST STA 799+68.15 =
POT STA 99+81.47 I-IG-29-3(8)57-04-78 ASBUILT PLANS

PN:146 PI STA 851+44.277 THIS SURVEY =
PI STA 226+59.94 920(3) PAVING PLANS

I-80 EAST HORIZONTAL DATUM 2001 SURVEY

THIS 2001 SURVEY IS A CONTINUATION OF THE 2000 SURVEY AND IS A RETRACE OF PRESENT I-80 ALIGNMENT NORTHEASTERLY. STATIONING WAS OBTAINED FROM PI STA. 4271+90.019 2000 SURVEY. THIS STATIONING WAS CARRIED AHEAD TO THE EOP.

EQUATIONS FOLLOW:

PI STA. 4271+90.019 THIS SURVEY=
PI STA. 4271+90.019 2000 J.ADAMS I-80 SURVEY=
POT STA. 271+90.50 2000 J.ADAMS I-29 SURVEY=
PI STA. 4271+90.0 FROM 1973 I-IG-80-1(54)2-04-78 AB PLAN

PI STA. 4304+81.31 THIS SURVEY=
POT STA. 4304+81.31 FROM 2000 J.ADAMS SURVEY

PI STA. 4313+63.72 THIS SURVEY=
PI STA. 1023+64.25 FROM I-IG-80-1(58)4-04-78 1974 AB PLAN

POT STA. 4373+48.51 THIS SURVEY=
ST STA. 1083+51.48 FROM I-IG-80-1(58)4-04-78 1974 AB PLAN=
POT STA. 81+86.39 ORIGINAL SURVEY

PI STA. 4454+27.55 THIS SURVEY=
PI STA. 162+72.0 FROM I-80-1(52)6-01-78 1973 AB PLAN

POT STA. 4547+27.97 THIS SURVEY=
POT STA. 252+29.4 FROM I-80-1(52)6-01-78 1973 AB PLAN=
ST STA. 256+60.39 FROM ROMESBURG SURVEY

VERTICAL DATUM(2000 SURVEY)

THIS SURVEY IS RELATIVE TO NGS NAVD 88 DATUM. NGS # W 131, PID-MJ0607 EL = 979.50 FT. WAS USED AS DATUM BM. THIS DATUM PLANE WAS CARRIED NORTHERLY & WESTERLY ALONG I-29 TO NGS # P 127 PID-MJ0660 EL = 1011.00 WHERE ADJUSTMENT WAS MADE.

EQUATIONS TO OTHER BENCHS FOLLOWS :

BM # 501 EL = 979.50 FT THIS SURVEY =
NGS # W 131 EL = 979.50

BM # 900 EL = 1011.00 FT THIS SURVEY =
NGS # P 127 EL = 1011.00 FT =
BM # P 127 EL = 1011.00 FT PROJECT # RM-1642(2)- - 90-78
CITY OF COUNCIL BLUFFS

BM # 514 EL = 1006.78 FT THIS SURVEY =
BM # 615A EL = 1006.38 FT. I-80-1(53)0- - 01-78 ASBUILT PLANS

BM # 517 EL = 991.04 FT THIS SURVEY =
BM 30A EL = 990.61 FT I-80-1(53)0 - - 01-78 ASBUILT PLANS =
BM # 2-H EL = 991.04 FT NEB. DOR

BM # 536 EL = 974.86 FT THIS SURVEY =
BM # 0-C EL = 974.90 FT NEB. DOR

BM # 530 EL = 978.18 FT THIS SURVEY =
BM # 0-B EL = 978.24 FT NEB.DOR

VERTICAL DATUM(I-29 NORTH 2001 SURVEY)

THIS SURVEY IS RELATIVE TO NAVD 88 DATUM AND I-29 2000 SURVEY. BM# 527 EL = 1011.883 OF 2000 SURVEY WAS USED AS DATUM BM. THIS DATUM PLANE WAS CARRIED NORTHERLY TO NGS # V 180 PID # NJ1380 (BM # 590) EL = 977.44 WHERE ADJUSTMENT WAS MADE.

EQUATIONS FOLLOW:

BM # 527 EL = 1011.883 THIS SURVEY =
BM # 527 EL = 1011.883 IM-80-1(257)1-13-78 2000 SURVEY

BM # 558 EL = 976.79 THIS SURVEY =
BM # 20A EL = 976.51 I-IG-29-3(17)54-04-78
1973 ASBUILT PLANS

BM # 560 EL = 1000.542 THIS SURVEY =
BM # 16D EL = 1000.25 I-IG-29-3(17)54-04-78
1973 ASBUILT PLANS

BM # 566 EL = 999.13 THIS SURVEY =
BM # H-6A EL = 998.78 I-29-3(6)56-78-24
1974 ASBUILT PLANS

BM # 577 EL = 996.952 THIS SURVEY =
USGS J 139 EL = 996.82 =
BM # 206 EL = 996.46 I-IG-29-3(8)57-04-78
1972 ASBUILT PLANS

BM # 582 EL = 1018.967 THIS SURVEY =
BM # 216A EL = 1018.66 I-IG-29-3(8)57-04-78
1972 ASBUILT PLANS

BM # 590 EL = 977.44 THIS SURVEY =
NGS B-180 EL = 977.44 PID#MJ1380 NAVD 88

VERTICAL DATUM(I-80 EAST 2001 SURVEY)

THIS SURVEY IS RELATIVE TO NAVD 88 DATUM AND I-80 2000 SURVEY. BM#504 EL 1002.280 OF THE 2000 SURVEY WAS USED AS A DATUM BM. THIS DATUM PLANE WAS CARRIED NORTHEASTERLY TO NGS 1020.910 (PID#MJ0550)EL. 1021.18 WHERE ADJUSTMENTS WERE MADE.

EQUATIONS FOLLOW;

BM # 504 EL. 1002.280 THIS SURVEY=
BM # 504 EL. 1002.280 FROM 2000 SURVEY

BM # 595 EL. 986.89 THIS SURVEY=
BM # 4 EL. 986.53 FROM I-IG-80-1(58)1-04-78 1974 AB PLAN=
TBM # 2 EL. 988.92 FROM IA.#375 F-280 PLAN

DETAILS OF REFERENCE INFORMATION

All References are Plumb Distances
unless otherwise noted.

No. 510 Sta. 4276+77.619 254.61 Lt. FD-IHC-BM-SE-WING-BR.
1-80/1-29-BR-OVER-1-80-E.----- 1007.367

No. 597 Sta. 4298+67.763 81.85 Lt. FD IHC SE.COR.WING WB.LNE
1-80 BRG OVER RR.YARD----- 1012.698

No. 596 Sta. 4299+02.245 55.39 Rt. FD IHC SE.COR.WING EB.LNE
1-80 BRG OVER RR.YARD----- 1009.530

No. 598 Sta. 4303+17.382 59.83 Rt. FD DOT BUTTON SW.COR.HNDL
EB.LANE 1-80 BRG.OVER
H.LANGDON BLVD.----- 1010.293

No. 595 Sta. 4304+21.331 148.69 Lt. FD IHC INLET 3X3 RCB
ON H.LANGDON BLVD.
BM# 595 ELEV. 986.89 THIS
SURVEY=
BM# 4 ELEV. 986.53 FROM
1-IG-80-1(58)4--04-78
1974 AB PLAN=
TBM# 2 ELEV. 988.92 FROM
1A.#375 F-280 PLAN----- 986.894

No. 599 Sta. 4304+65.040 62.50 Lt. CUT"X"NE.COR.HNDRL.W.B.
LANE 1-80 BRG OVER
H. LANGDON BLVD.----- 1011.092

No. 600 Sta. 4317+81.751 105.96 Rt. CUT"X"E.CONC.SIGN BASE
(GAS-FOOD-LODGING-EXIT 5----- 1034.911

No. 601 Sta. 4321+44.921 55.32 Rt. FD IHC SE.COR.WING E.B.
LANE 1-80 BRG.OVER OLD RR----- 1042.522

No. 602 Sta. 4323+29.186 55.22 Lt. FD IHC NW.COR.WING W.B.
LANE 1-80 BRG.OVER OLD RR----- 1043.789

No. 603 Sta. 4335+16.615 66.64 Rt. CUT"X"E.SIDE CONC.LUM BAS
JUST N. N.B. MADISON EXIT----- 1028.111

No. 604 Sta. 4344+23.877 59.60 Rt. CUT"X"SE.COR.HNDRL E.B.
LANE 1-80 BRG.OVR MAD.AVE----- 1019.332

No. 605 Sta. 4345+73.212 59.26 Lt. CUT"X"NW.COR.HNDRL.W.B.
LANE 1-80 BRG.OVR MAD.AVE----- 1024.233

No. 606 Sta. 4358+52.811 78.37 Lt. CUT"X"NW.COR.CONC.WING WB
LANE 1-80 BRG.OVR RR&STRM----- 1025.952

No. 607 Sta. 4363+21.110 64.57 Rt. CUT"X"SE.COR.CONC.WING EB
LANE 1-80 BRG.OVR RR&STRM----- 1021.810

No. 608 Sta. 4373+08.616 153.21 Rt. SET RR.SPK.NW.SIDE P.POLE
STA. 1083+12 +/------ 1012.498

No. 609 Sta. 4386+84.771 126.49 Lt. FD.CONC.MON. STA.95+21+/------ 1013.424

No. 610 Sta. 4392+80.169 93.33 Rt. FD.IHC INLET HDWL.4X4 RCB
STA. 101+20 +/------ 1010.341

No. 611 Sta. 4402+97.319 17.06 Rt. FD.IHC NW.COR.CONC.WING
E.B.LANE 1-80BRG.OVR.RD.----- 1028.157

No. 612 Sta. 4404+07.949 60.98 Lt. CUT"X"NE.COR.CONC.WING
W.B.LANE 1-80 BRG.OVR.RD.----- 1028.964

No. 613 Sta. 4405+67.300 129.40 Rt. FD.IHC INLET HDWL.6X6 RCB
BM # 613 ELEV. 1013.71
THIS SURVEY=
BM # 101 ELEV. 1013.34
FROM 1-80-1(51)6--01-78
1973 AB PLAN----- 1013.705

No. 614 Sta. 4423+59.730 67.85 Rt. CUT"X"OUTLET 24" RCP
STA. 132+00 +/------ 1021.342

No. 615 Sta. 4434+44.039 61.04 Lt. FD.IHC SW.COR.WING W.B.
1-80 BRG. OVER RD.----- 1027.569

No. 616 Sta. 4437+31.302 60.71 Rt. CUT"X"NE.COR.WING E.B.
1-80 BRG. OVER RD.----- 1028.474

No. 617 Sta. 4452+62.621 111.78 Lt. CUT"X" CONC.SIGN BASE
STA.161+15 +/- NW.SIDE RD----- 1059.930

No. 618 Sta. 4460+69.629 100.48 Lt. CUT"X" CONC.SIGN BASE
STA.169+14 +/- NW.SIDE RD----- 1086.069

No. 619 Sta. 4470+92.202 100.81 Rt. CUT"X"CONC.SIGN BASE
STA.179+45 +/- SE.SIDE RD----- 1116.865

No. 620 Sta. 4482+50.239 145.95 Rt. CONC.MON.IN SE.FENCE LINE
BM # 620 ELEV. 1144.34
THIS SURVEY=
BM # 117 ELEV. 1144.51
FROM 1-80-1(51)6--01-78
1973 AB PLAN----- 1144.335

No. 621 Sta. 4493+68.756 150.17 Rt. SET TWIN 60D NAILS IN WD.
FENCE POST E.PI STA.202+2----- 1141.883

No. 622 Sta. 4513+88.256 65.08 Rt. CUT"X" NW.SIDE CONC.LUM
BASE SE.SIDE E.B. LANE----- 1168.647

No. 623 Sta. 4521+76.422 17.14 Lt. FD.IHC SE.COR.WING W.B.
LANE BRG.OVER U.S.HWY. 6
BM # 623 ELEV. 1182.60
THIS SURVEY=
BM # 124 ELEV. 1182.14
FROM 1-80-1(51)6--01-78
1973 AB PLAN----- 1182.595

No. 624 Sta. 4524+58.600 61.23 Rt. CUT"X"NE.COR.WING E.B.
LANE BRG.OVER U.S.HWY. 6----- 1181.706

No. 625 Sta. 4535+21.208 90.90 Lt. CUT"X" CONC.LUM.BASE NW.
SIDE RD.STA. 243+52 +/------ 1160.175

No. 626 Sta. 4546+94.518 135.69 Lt. SET RR.SPK.SE.SIDE P.POLE
STA. 259+70 +/------ 1138.090

MISCELLANEOUS LOCATIONS

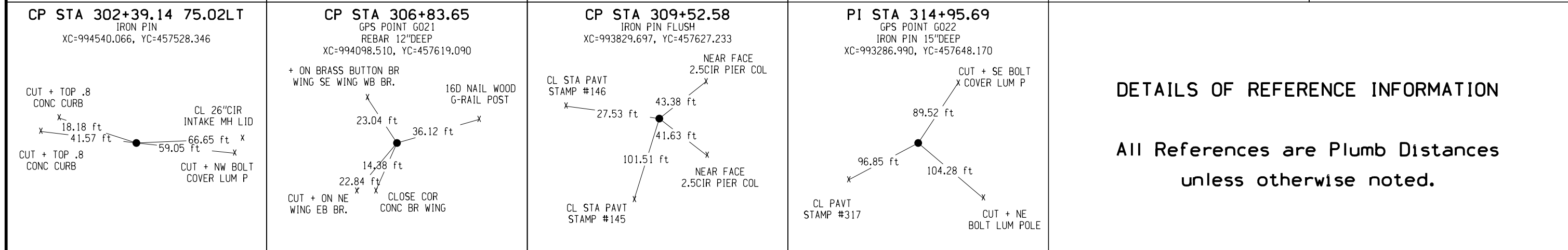
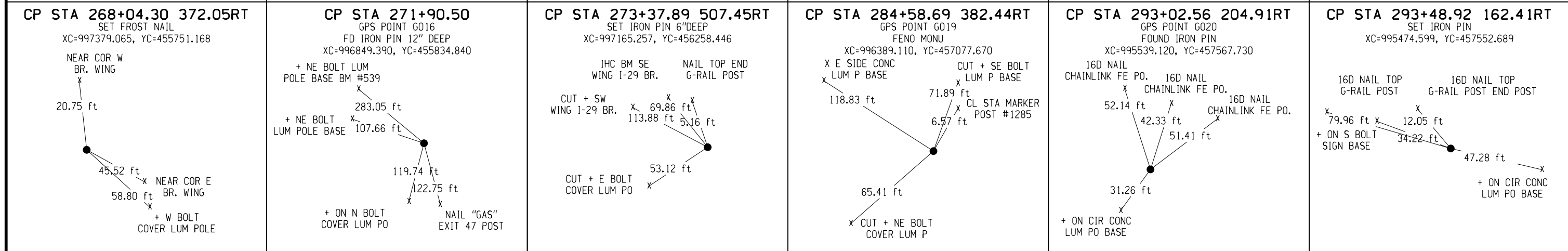
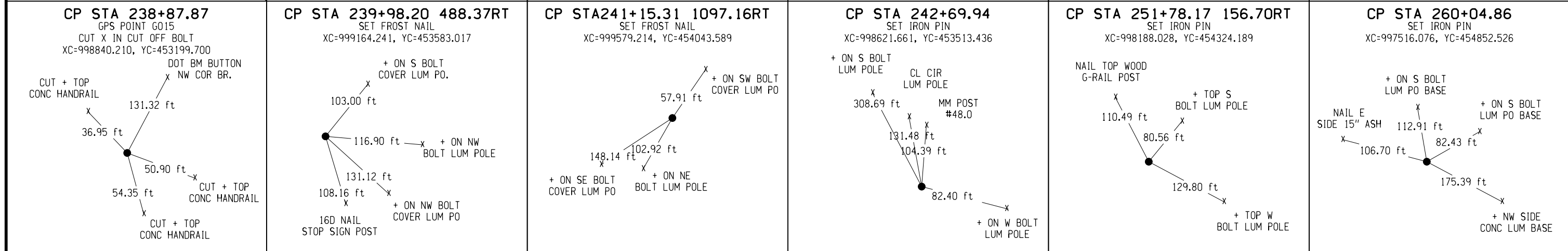
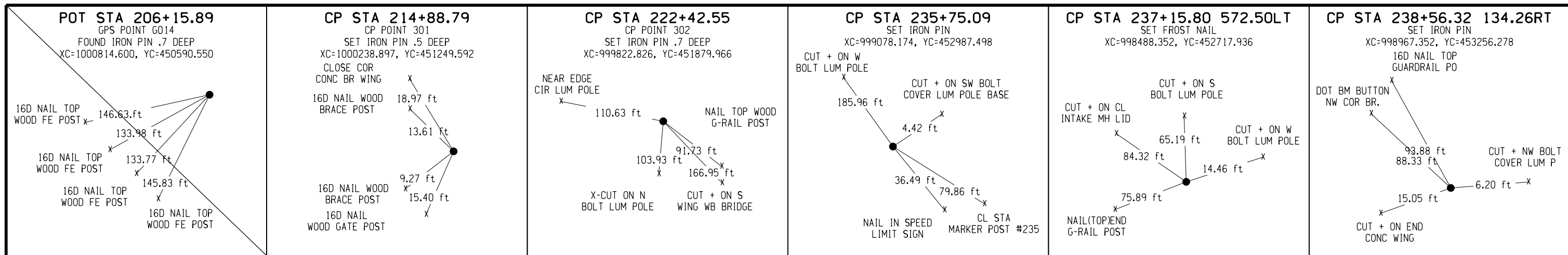
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PID # MJ0607----- 979.500

No. 502 ***** CUT--+EAST-BOLT-LUM-POLE----- 1000.710

No. 900 ***** FD-STANDARD-BENCH-DISK
USGS P 127 NAVD 88 DATUM
STAMPED P 127 1947
PID MJ0660----- 1011.000

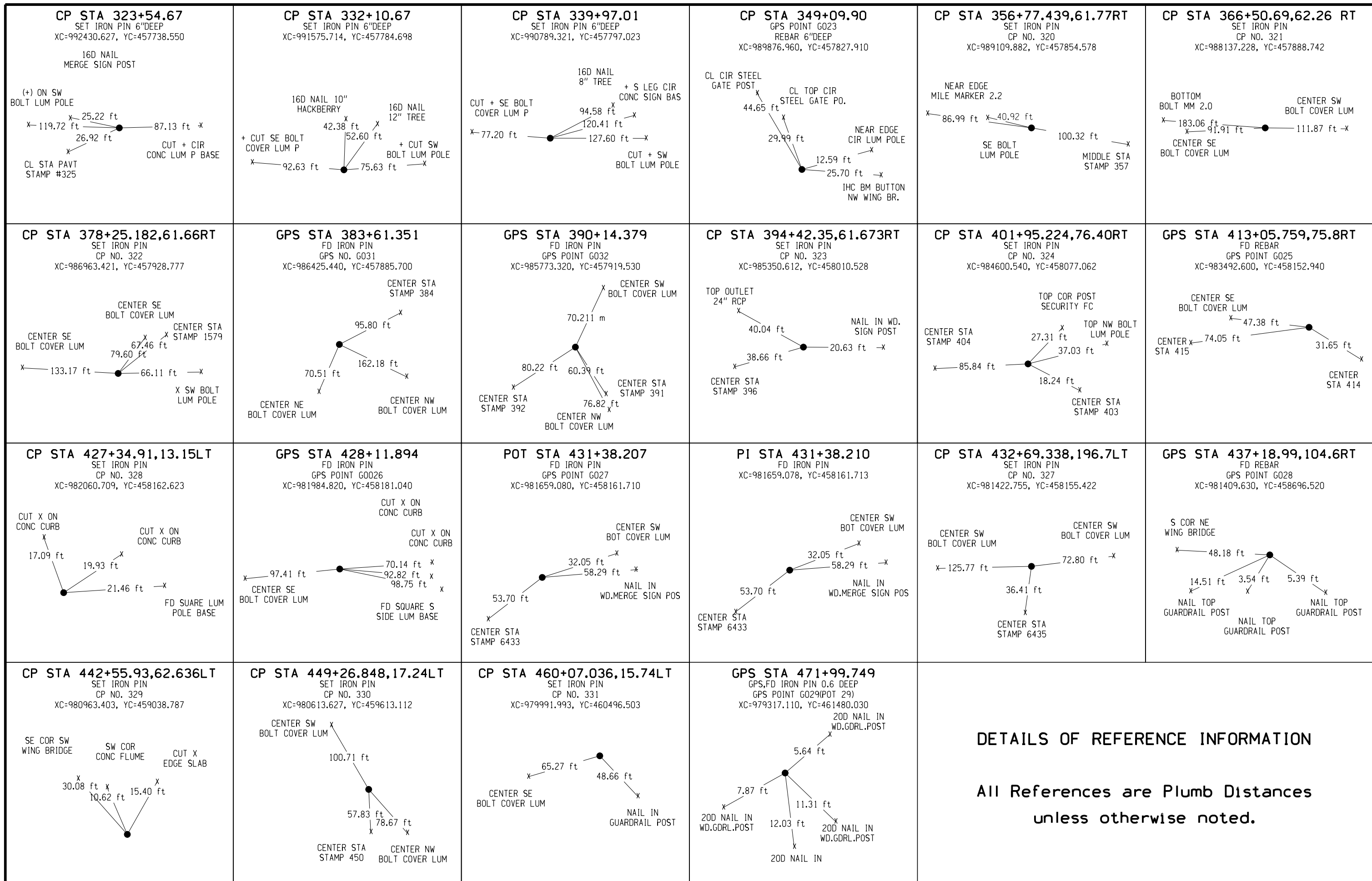
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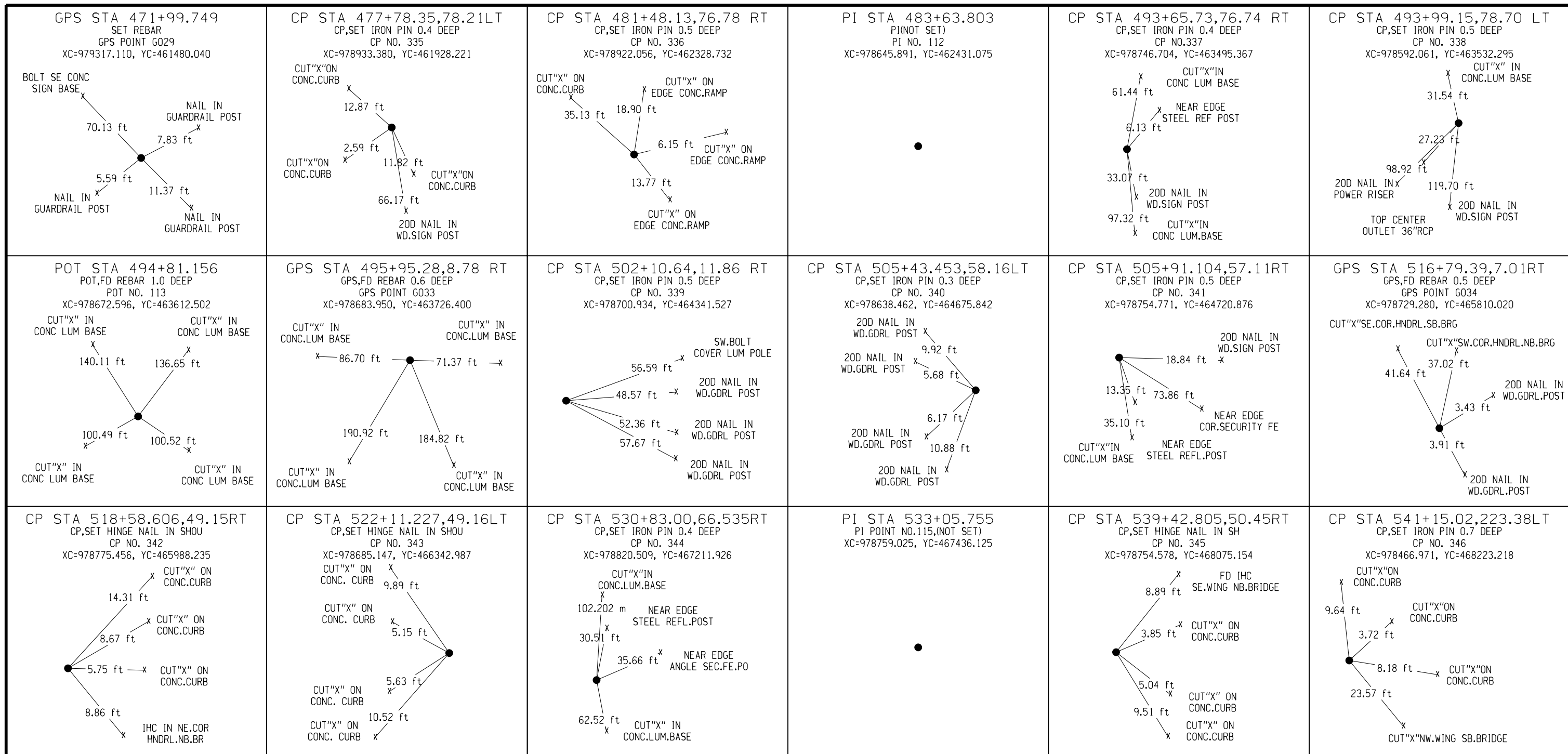
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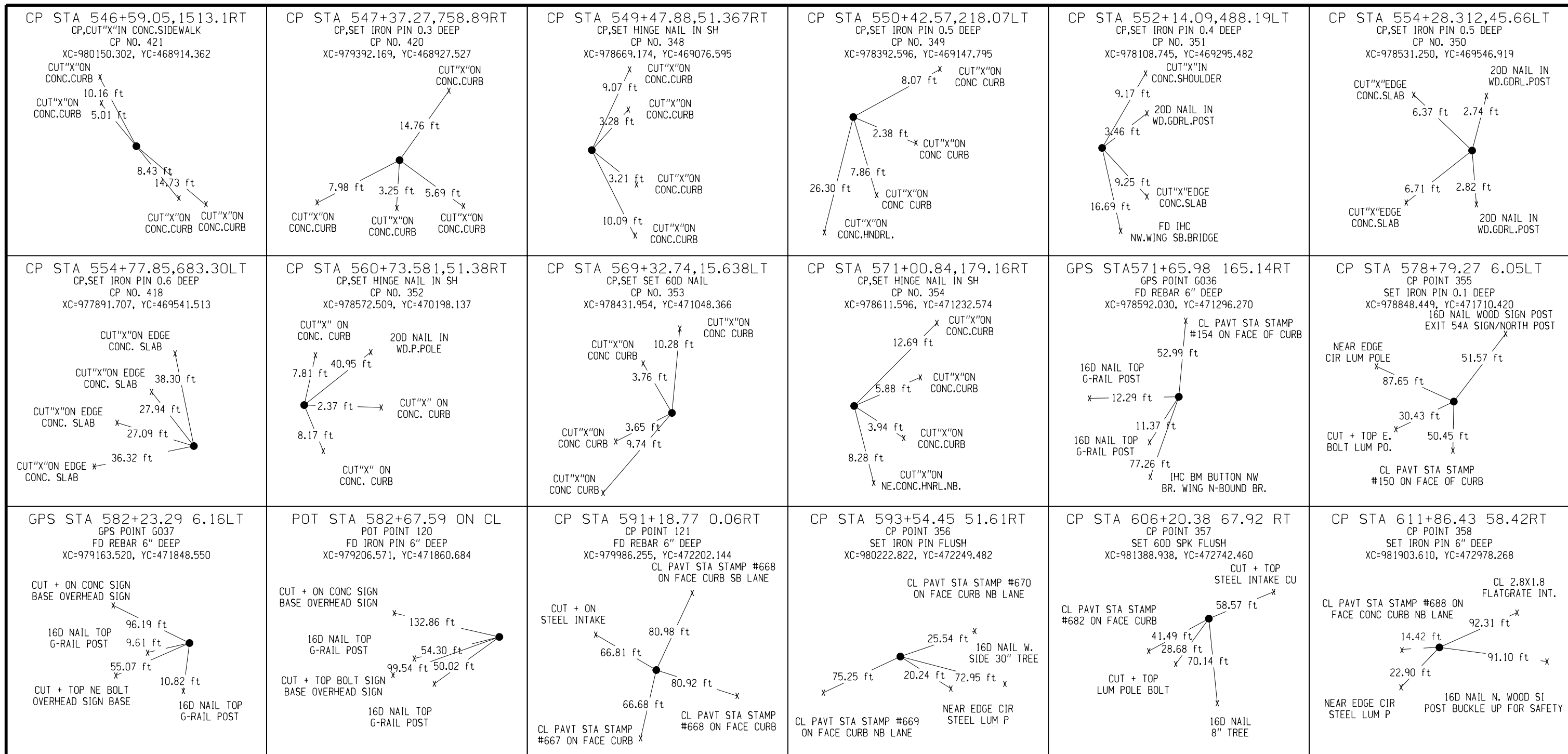


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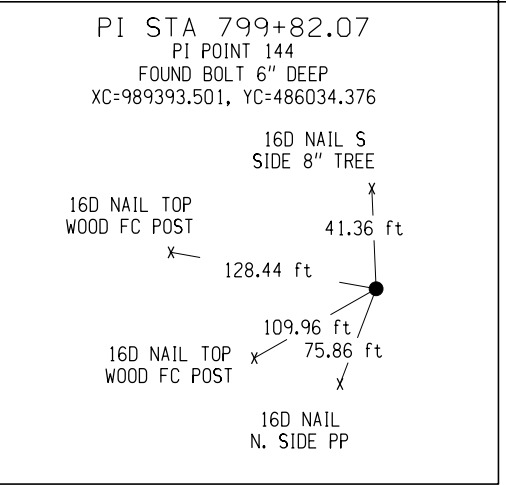
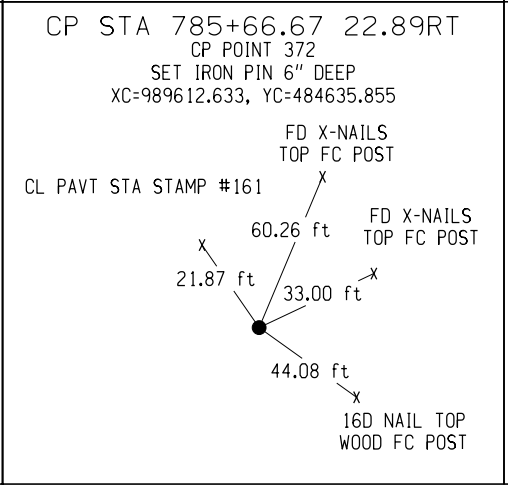
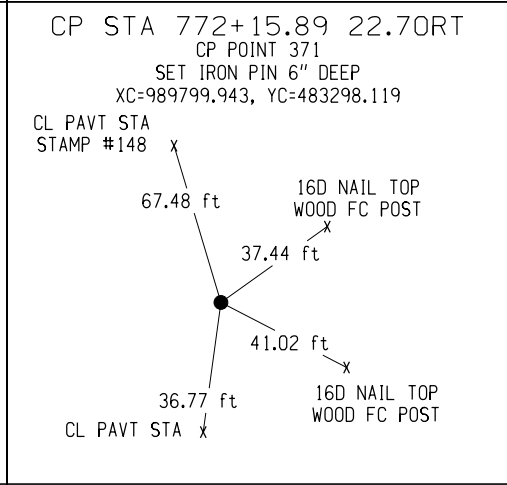
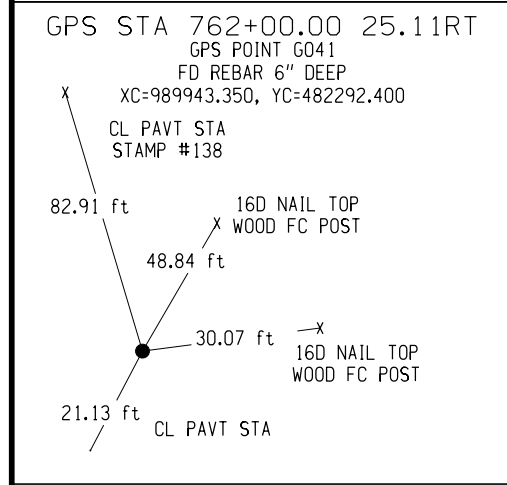
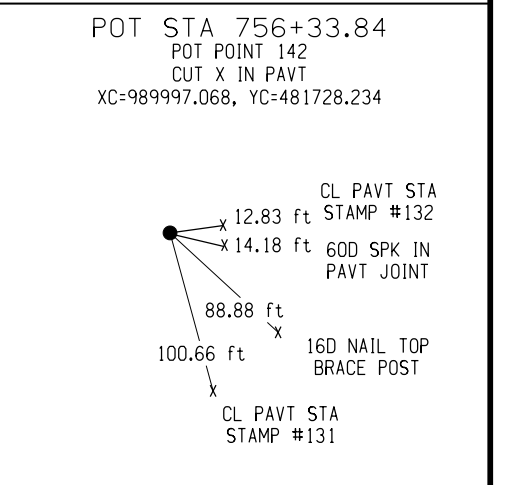
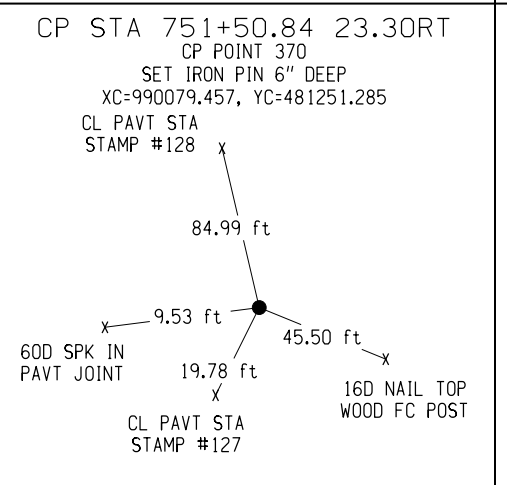
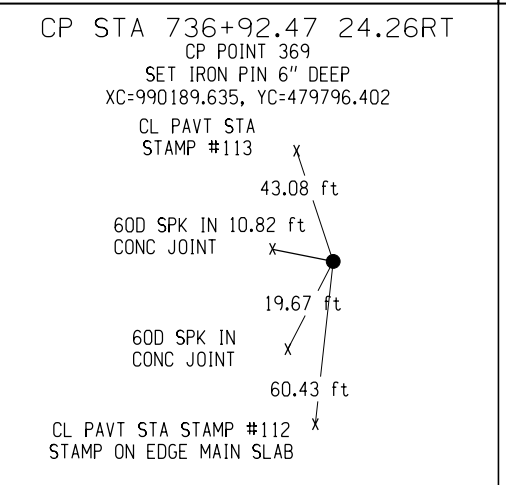
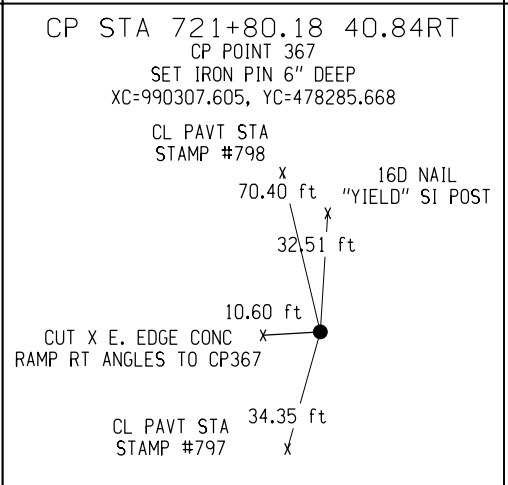
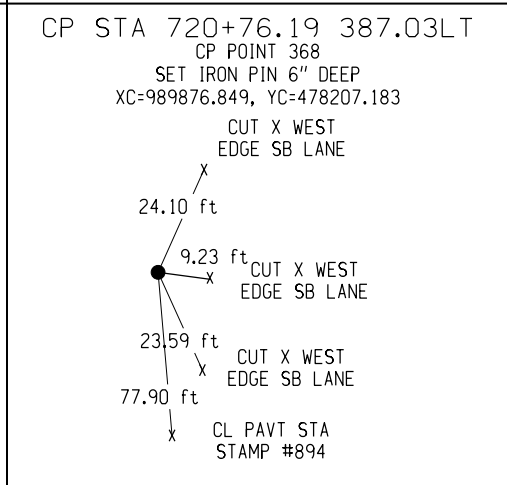
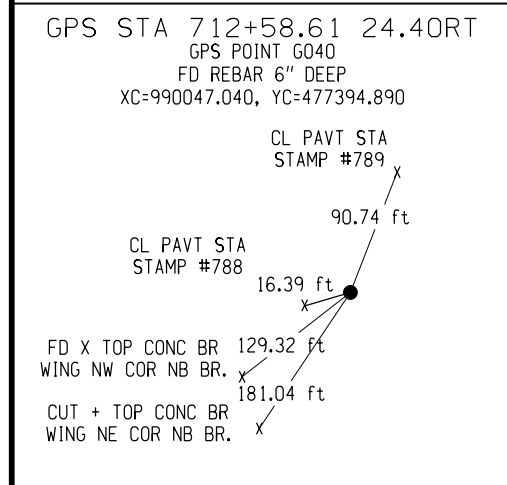
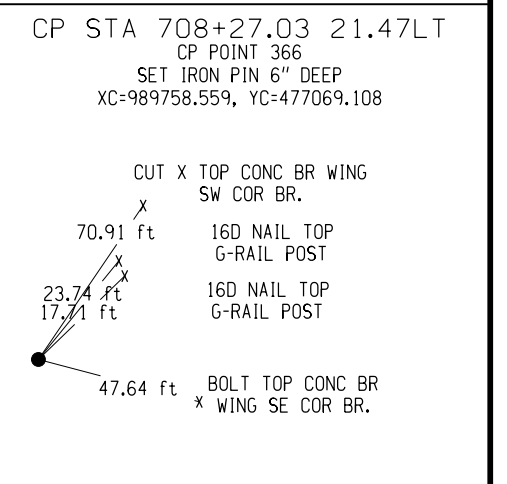
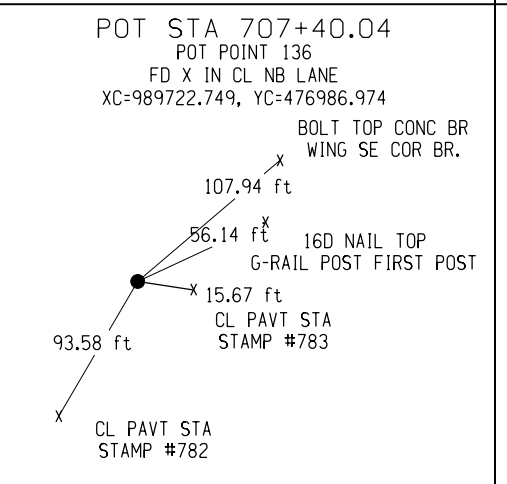
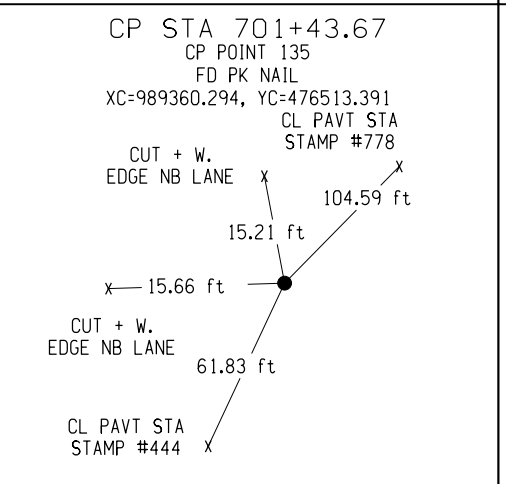
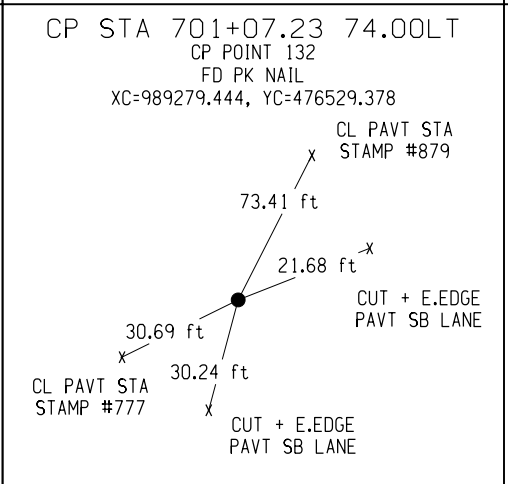
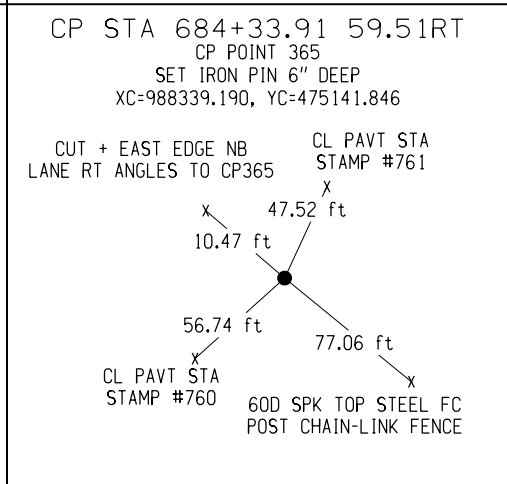
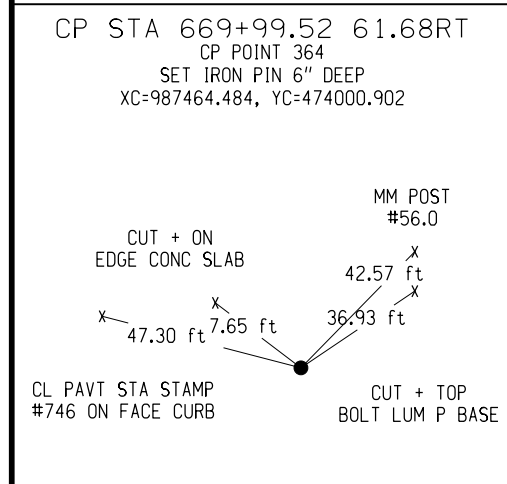
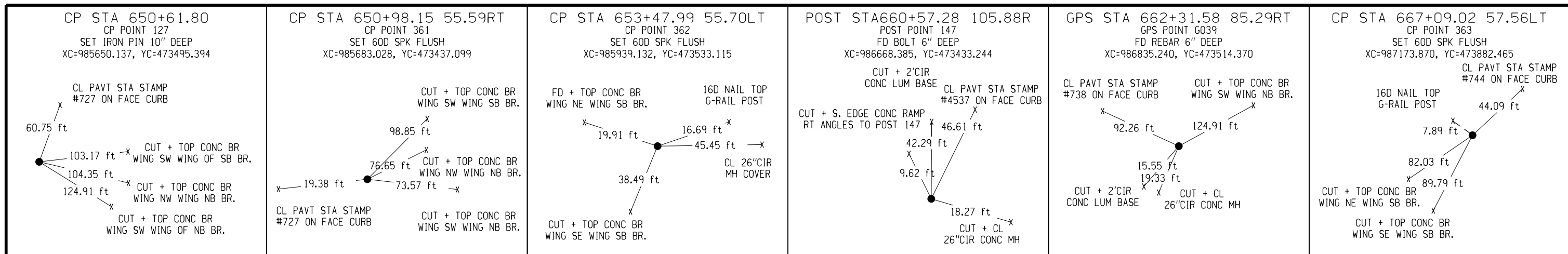


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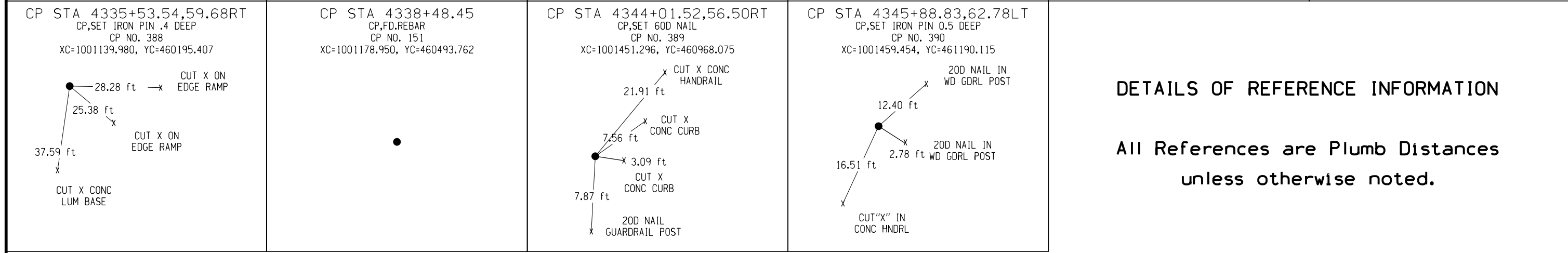
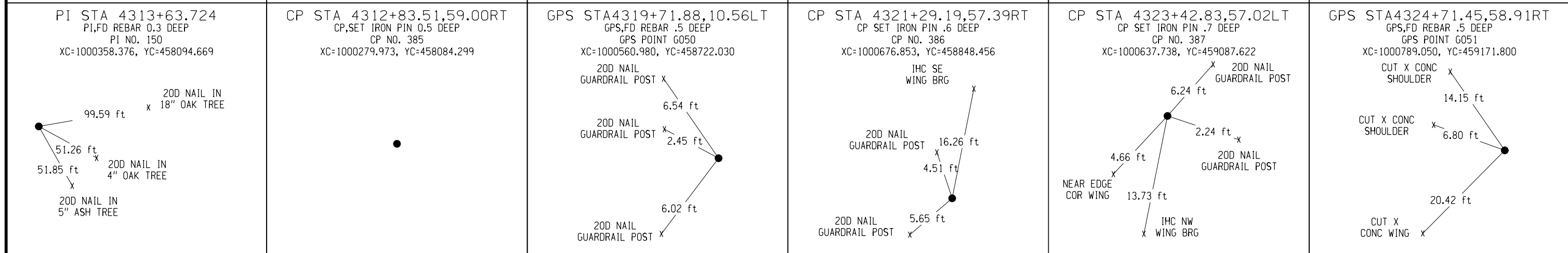
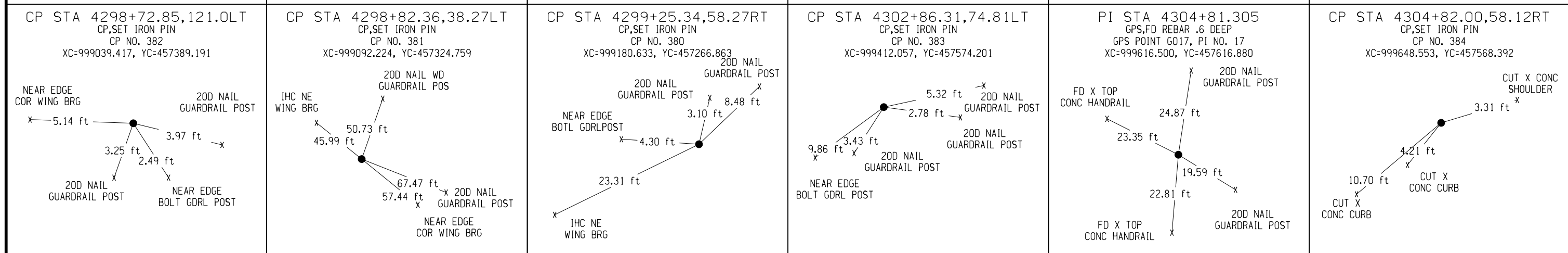
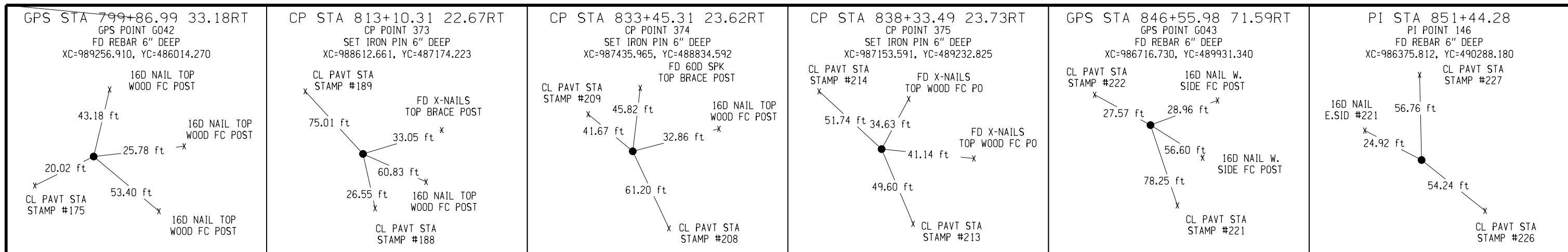
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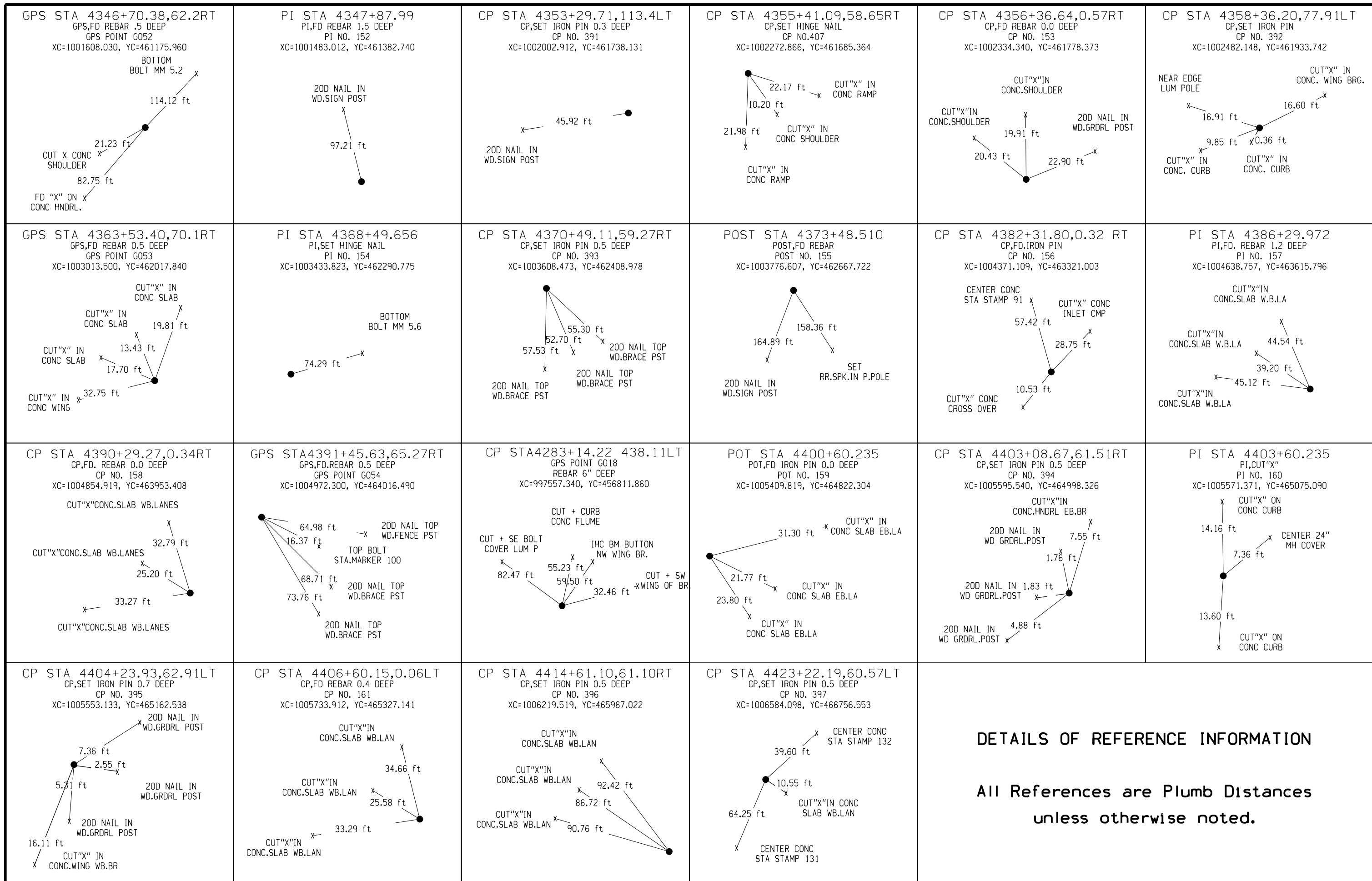
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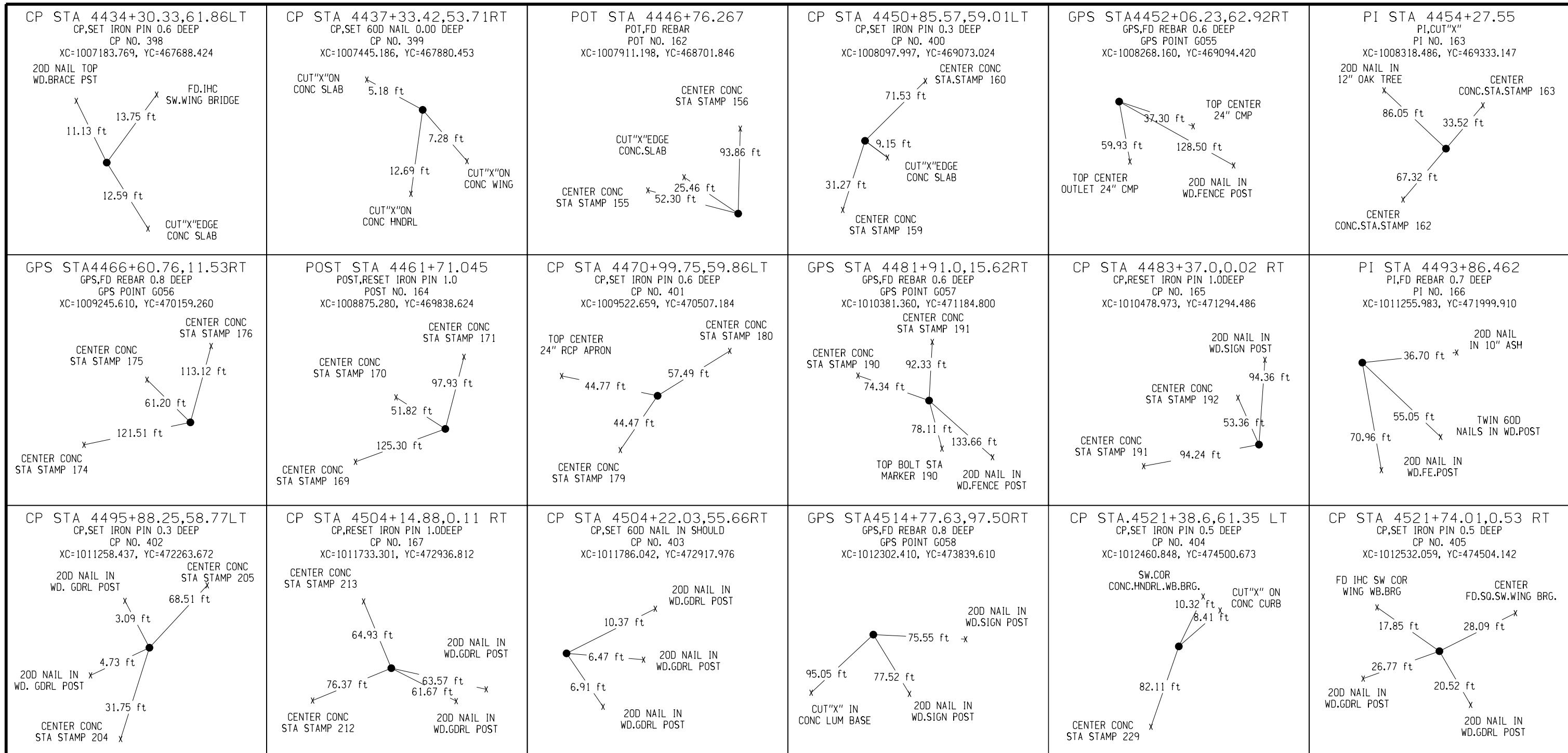
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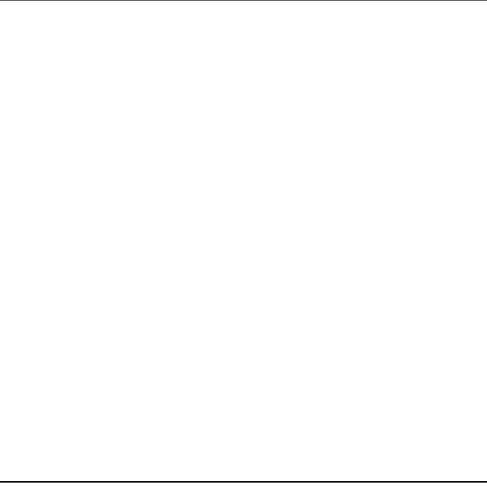
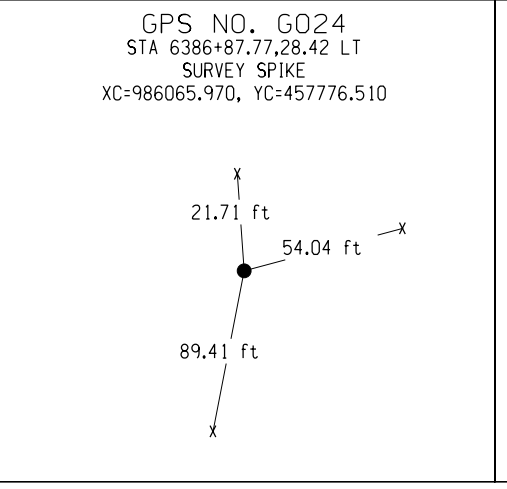
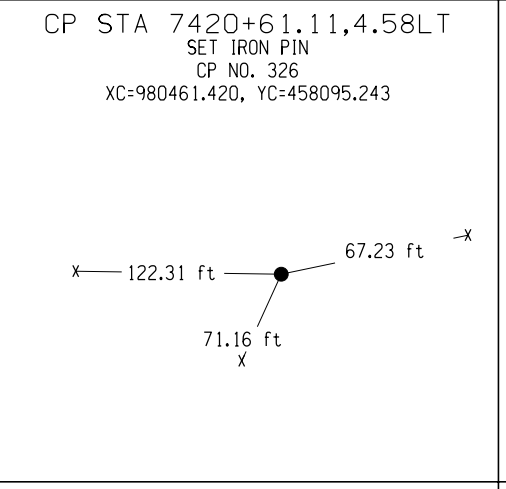
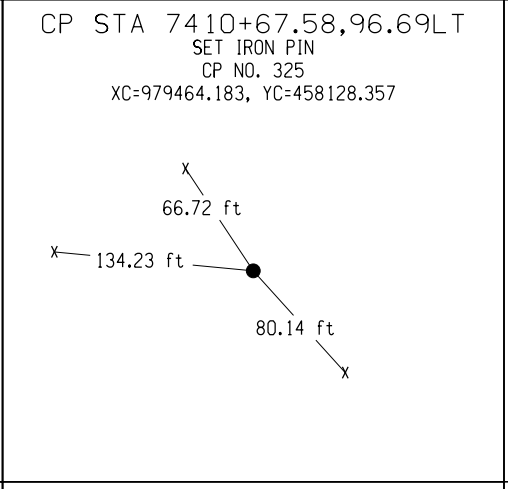
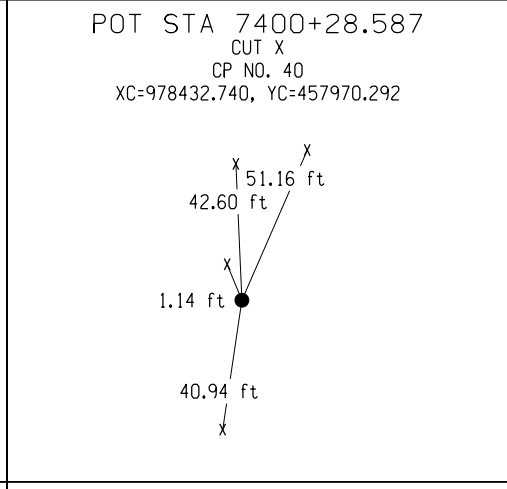
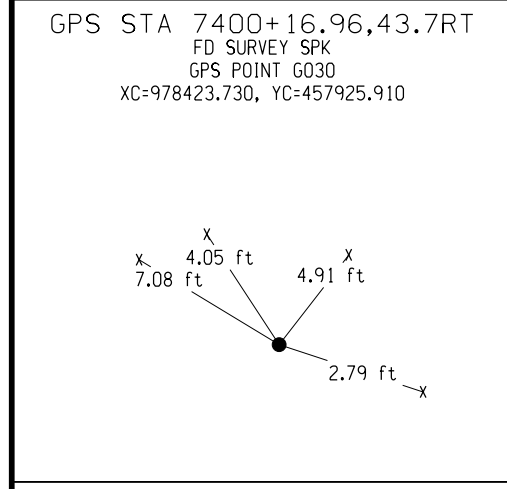
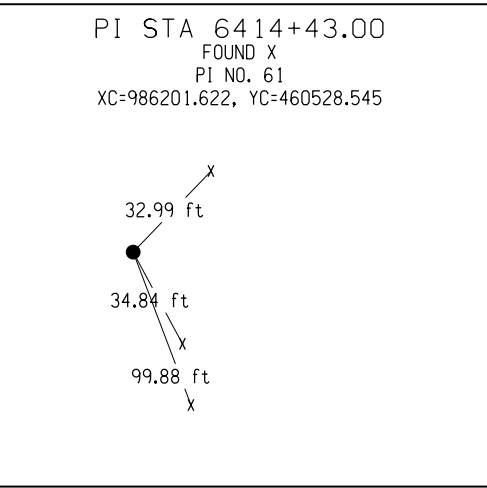
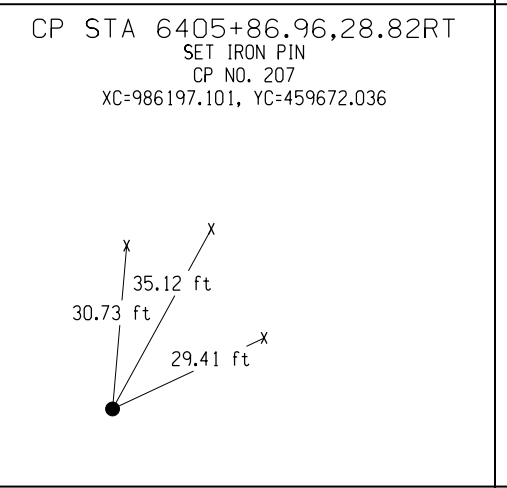
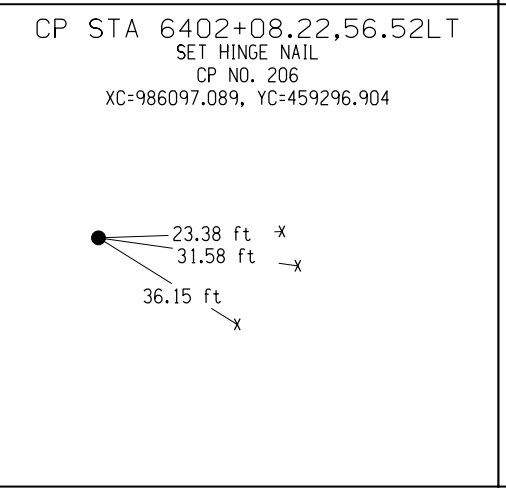
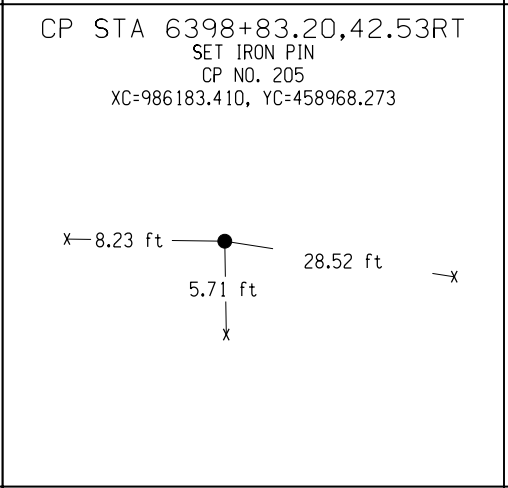
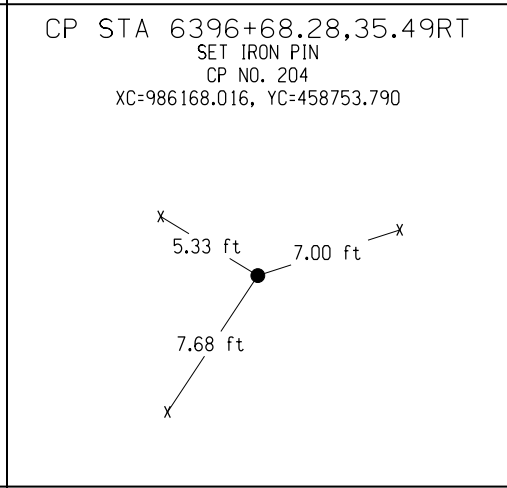
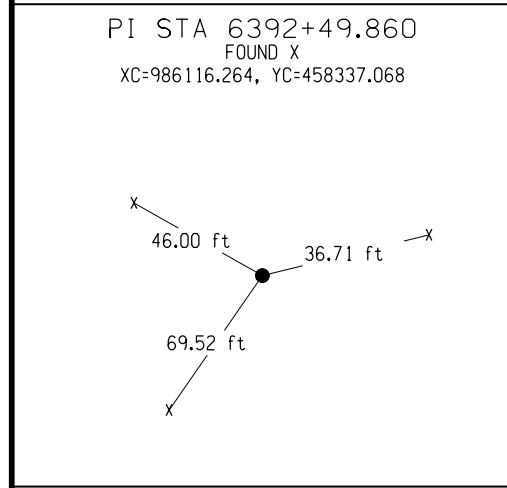
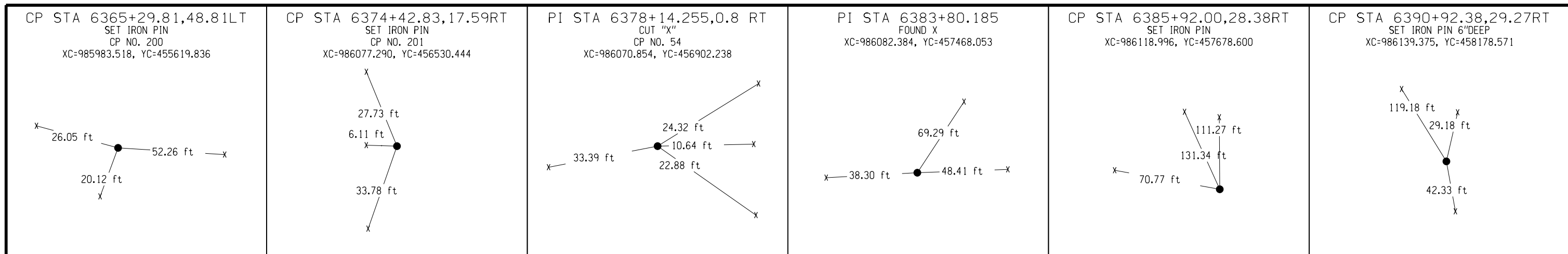


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CBIS Rail Consolidation Track Staging

108-23
04-04-89

General Staging Notes:

- Contractor to coordinate all work outages with affected railroads and rail-served industries.
- Contractor to coordinate all roadway and trail closures with the City of Council Bluffs.
- Contractor shall not work within existing railroad rights-of-way without a right-of-entry agreement and prior coordination with the railroad.
- Flagging will be necessary for all work performed within 25' of active rail lines.
- All traffic control devices shall be furnished, installed, maintained, and removed by the contractor.
- Two roadway closures will not be allowed at the same time.

Stage 1:

- Traffic:**
- IAIS Council Bluffs Yard Tracks 1 through 3 removed from service.
 - IAIS Council Bluffs Yard Lead outage (8 hours) for turnout installation.
- Construction:**
- Remove existing IAIS Yard Tracks 1 through 3.
 - Remove existing IAIS Maintenance Track.
 - Construct proposed IAIS North Yard Connection and Maintenance Track.

Stage 2:

- Traffic:**
- IAIS Council Bluffs Yard Lead and Track 4 outage (8 hours) for turnout installation.
- Construction:**
- Construct remainder of proposed IAIS North Yard Connection.
 - Construct IAIS Track 4 Connection.
 - Remove existing IAIS Yard Lead.

Stage 3:

- Traffic:**
- IAIS Council Bluffs Yard access via new North Yard Connection.
- Construction:**
- Construct IAIS Interchange Tracks 1 and 2.
 - Construct IAIS south Yard Connection.

Stage 4:

- Traffic:**
- IAIS Interchange Tracks in service and accessible from north.
 - BNSF Council Bluffs Subdivision track outage (8 hours) for turnout installation.
 - CBEC Junction north connection to BNSF removed from service.
- Construction:**
- Remove CBEC Junction track from existing turnout to BNSF right-of-way and terminate with bumping post - spike existing BNSF turnout for straight movement.
 - Install turnouts for BNSF Connection and SIRE Connection.
 - Construct BNSF Connection from turnout to 15' clear point including track plug for future flange bearing diamond crossing installation for CBEC Main Track crossing.
 - Construct proposed Lake Manawa Trail from existing trail clear points including box culvert for underpass of proposed CBEC Main Track.

STAGING NOTES

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Stage 5:

- Traffic:**
- CBEC Main Track outage (8 hours) for turnout installation and track surfacing.
 - BNSF Council Bluffs Subdivision track outage (8 hours) to shift track to new alignment.
 - BNSF Bayard Subdivision track outage (8 hours) for temporary turnout installation.
 - SIRE track outage (8 hours) for turnout installation.
 - Lake Manawa Trail outage (5 days) for paving trail connections.
- Construction:**
- Construct remaining BNSF Connection track and shift existing track to proposed alignment.
 - Install temporary turnout for BNSF Wye construction.
 - Install CBEC turnout north of Mid-American plant entrance and shift existing CBEC track to proposed alignment.
 - Surface and raise existing CBEC track between BNSF Council Bluffs Subdivision and Mosquito Creek Bridge to proposed profile.
 - Install crossing diamond for SIRE Connection of CBEC Main Track.
 - Install turnout for Bartlett Connection.
 - Remove existing BNSF turnout from CBEC Main Track beneath South Expressway.
 - Construct connections between existing Lake Manawa Trail and proposed Lake Manawa Trail and remove existing trail between connection points.

Stage 6:

- Traffic:**
- No impacts.
- Construction:**
- Construct proposed BNSF Main Track from CBEC Junction to existing CBEC Main Track.
 - Construct proposed BNSF Wye.
 - Construct CBEC Main Track from Mid-American plant entrance to BNSF Connection.
 - Construct CBEC Main Track from BNSF Connection to existing CBEC Main Track.
 - Construct SIRE Connection from BNSF turnout to CBEC crossing diamond.
 - Construct SIRE Connection from CBEC crossing diamond to existing SIRE track.
 - Construct SIRE Connection from existing SIRE track to SIRE turnout.

Stage 7:

- Traffic:**
- BNSF Bayard Subdivision outage (24 hours) for temporary turnout removal, proposed turnout installation, track shift and surfacing.
 - CBEC Main Track outage (36 hours) for track construction.
 - SIRE track outage (48 hours) for diamond crossing installation.
 - CBEC and SIRE track outages to occur concurrently.
- Construction:**
- Remove BNSF Wye construction temporary turnout and Bayard Subdivision track to be removed.
 - Construct proposed turnout and trackage for south connection to IAIS interchange tracks.
 - Construct remaining track for northeast leg of BNSF Wye and shift / surface existing track to proposed alignment and profile.
 - Remove existing CBEC Main Track from proposed connection to Mosquito Creek.
 - Construct BNSF Wye tracks at south throat of the wye.
 - Construct proposed CBEC Main Track connection to existing track.
 - Remove track plug from BNSF Connection Track and install flange bearing diamond between BNSF and CBEC.
 - Remove existing SIRE Track through limits of diamond crossing construction.
 - Construct crossing diamond between existing SIRE alignment and proposed SIRE Connection.

STAGING NOTES

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Stage 8:

- Traffic:**
- BNSF and CBEC traffic routed via newly constructed Mosquito Creek corridor.
 - SIRE traffic routed via SIRE Connection.
 - IAIS Main Track outage (8 hours) for turnout installation.
 - 16th Avenue traffic restrictions for phased street construction to accommodate BNSF track removal - contractor to maintain 1 lane of traffic (12' minimum width) in each direction through the duration of construction.
 - 6th Street closure for street construction to accommodate BNSF track removal - through traffic to be detoured via 16th Avenue, Main Street, and 14th Avenue.
 - 7th Street to be permanently closed at existing IAIS and CBEC rail corridor.
- Construction:**
- Panelize and store existing SIRE alignment track, raise existing grade to proposed profile, and reinstall panelized SIRE track.
 - Install turnouts for BNSF North Connection on existing IAIS Main Track.
 - Construct Bartlett Connection track outside of clear points to existing BNSF tracks.
 - Remove existing BNSF track from CBEC Main Track to approximately 50 feet south of 16th Avenue.
 - Construct 16th Avenue roadway improvements.
 - Construct 6th Street roadway improvements.
 - Construct 7th Street connection and remove existing 7th Street at-grade rail crossing.

Stage 9:

- Traffic:**
- 8th Street and 12th Avenue intersection closure to accommodate BNSF North Connection construction - through traffic detoured via 14th Avenue, 7th Street, and 10th Avenue.
- Construction:**
- Construct BNSF North Connection Segment 2 from IAIS turnout to existing BNSF track.
 - Construct 8th Street and 12th Avenue roadway improvements.

Stage 10:

- Traffic:**
- BNSF outage (24 hours) for track construction, shifts, and surfacing.
 - Bartlett grain outage during BNSF outage.
- Construction:**
- Remove existing BNSF trackage necessary to accommodate proposed track construction.
 - Construct BNSF North Connection Segment 2 remaining track and surface / shift existing track to proposed alignment and profile.
 - Construct BNSF North Connection Segment 1 and shift existing track to proposed alignment.
 - Construct remaining Bartlett Connection track including turnout, derail, and connection for Bartlett Locomotive Tie-Up Track and turnout for Western Engineering track.
 - Rehabilitate existing BNSF track to accommodate Bartlett service.

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Stage 11:

- Traffic:**
- BNSF traffic routed via BNSF North Connection.
 - Bartlett served from the north utilizing IAIS Interchange Tracks.
 - Existing BNSF Council Bluffs Subdivision retired north of 32nd Avenue.
- Construction:**
- Remove existing BNSF and Bartlett tracks under proposed Interstate.
 - Construct / surface proposed Bartlett tracks and terminate with bumping posts.

Stage 12:

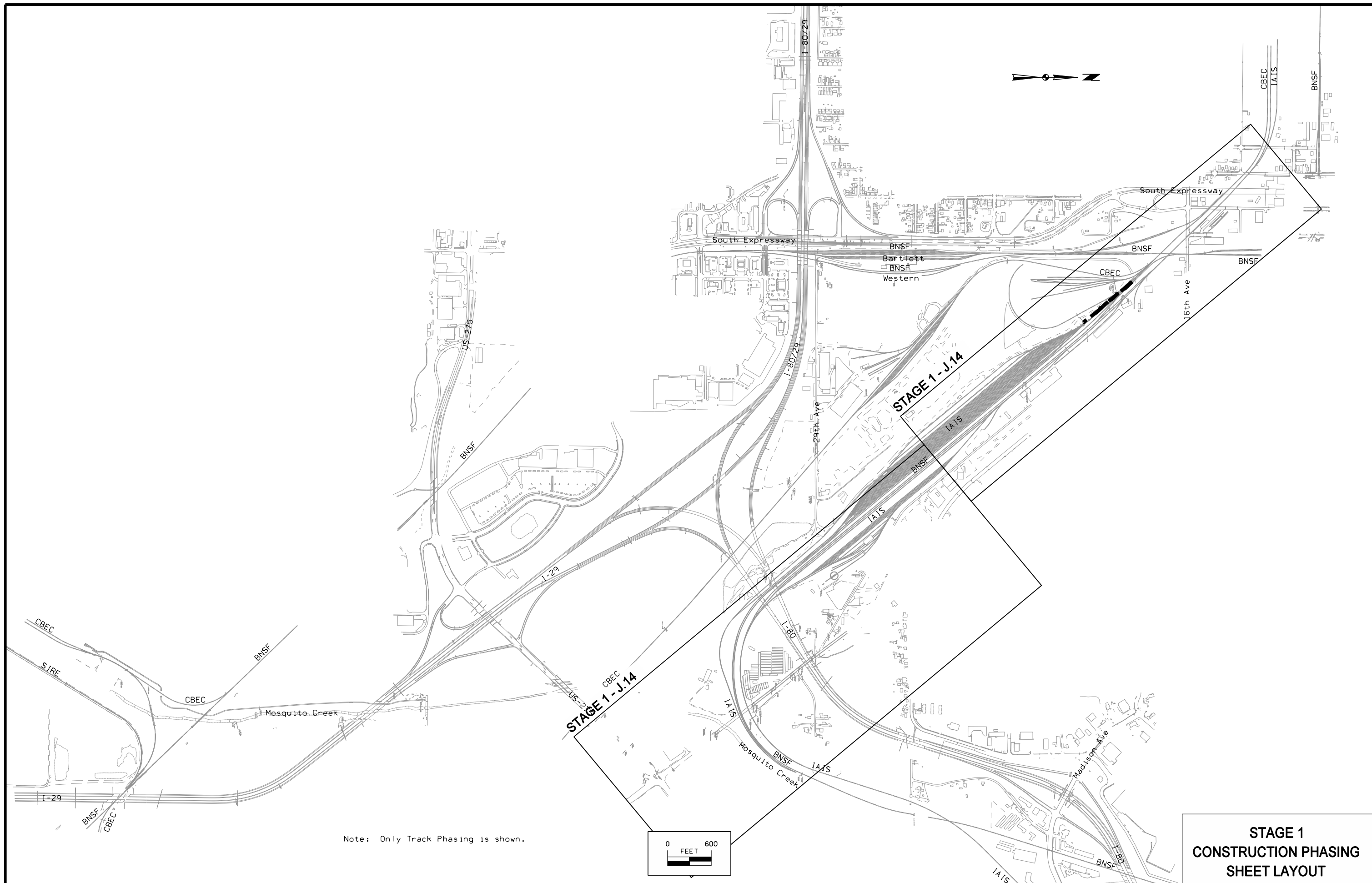
- Traffic:**
- Western Engineering served from the north utilizing IAIS Interchange Tracks.
- Construction:**
- Remove existing BNSF and Western tracks under proposed Interstate and north of proposed connection to existing Western track.
 - Construct proposed Western lead and connection to existing BNSF Main Track and terminate both tracks with bumping posts.

Stage 13 (Future CBEC 2nd Main Track Construction):

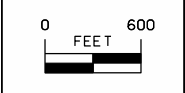
- Traffic:**
- CBEC Main Track outage (8 hours) for turnout installation.
- Construction:**
- Install turnouts for CBEC 2nd Main Track.
 - Construct CBEC 2nd Main Track including bridge over Lateral 5.

Stage 14 (Future CBEC 2nd Main Track Extension Construction):

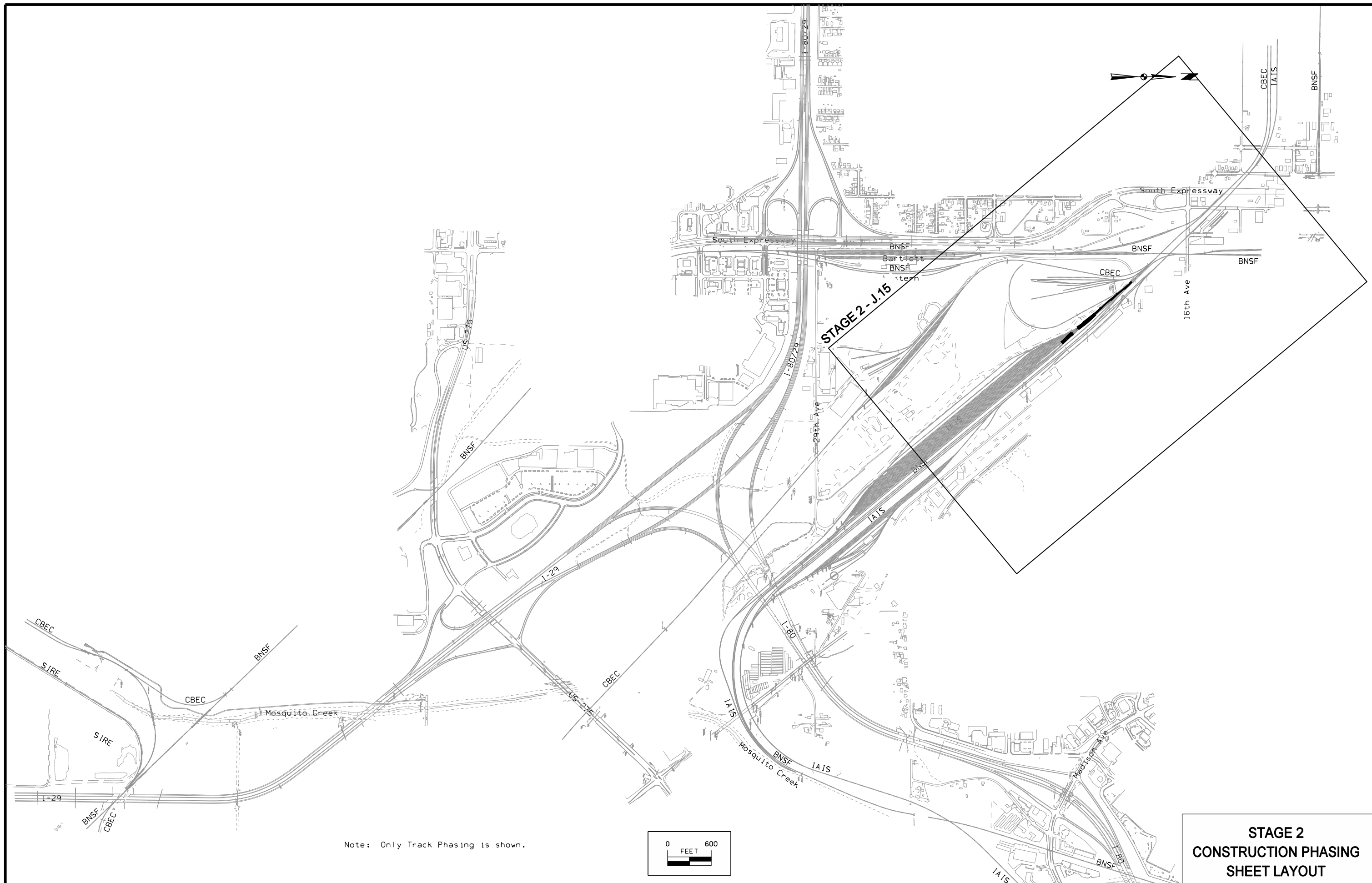
- Traffic:**
- CBEC Main Track outage (8 hours) for turnout installation.
 - CBEC Main Track and 2nd Main Track outage (8 hours) for turnout removal and track shift.
 - BNSF Connection to Existing Council Bluffs Subdivision (Future Weyerhaeuser Lead) outage (24 hours) for installation of flange-bearing diamond crossing.
- Construction:**
- Install turnout north of Mid-American plant entrance.
 - Install flange-bearing crossing diamond on BNSF track for CBEC 2nd Main Track Extension.
 - Construct CBEC 2nd Main Track Extension between turnout and flange-bearing diamond.
 - Construct CBEC 2nd Main Track Extension between flange-bearing diamond and CBEC 2nd Main Track.
 - Remove CBEC 2nd Main Track turnout and shift CBEC 2nd Main Track to CBEC 2nd Main Track Extension alignment.



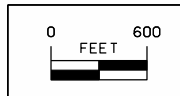
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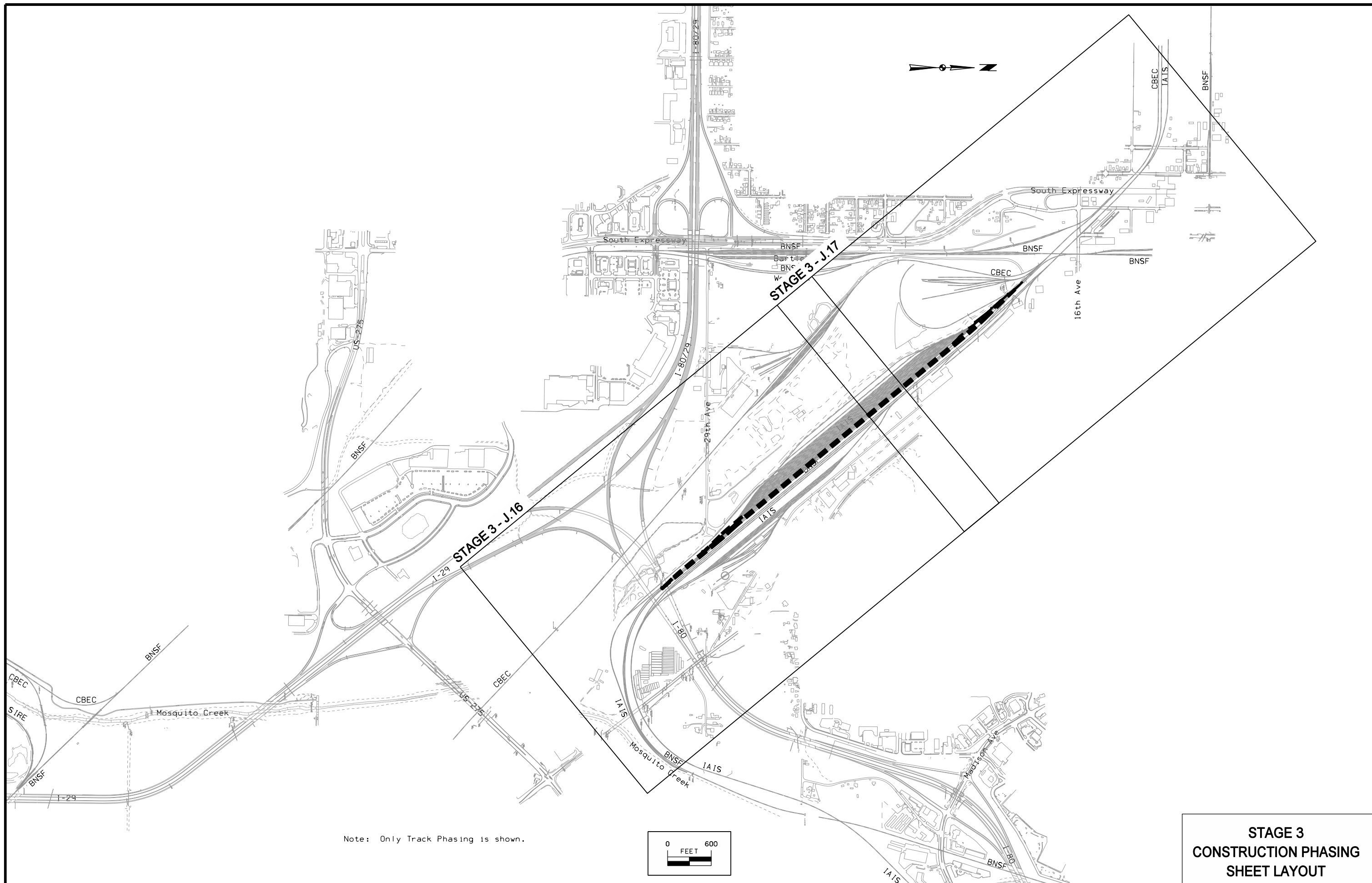
**STAGE 1
CONSTRUCTION PHASING
SHEET LAYOUT**



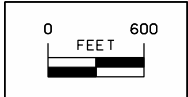
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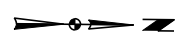
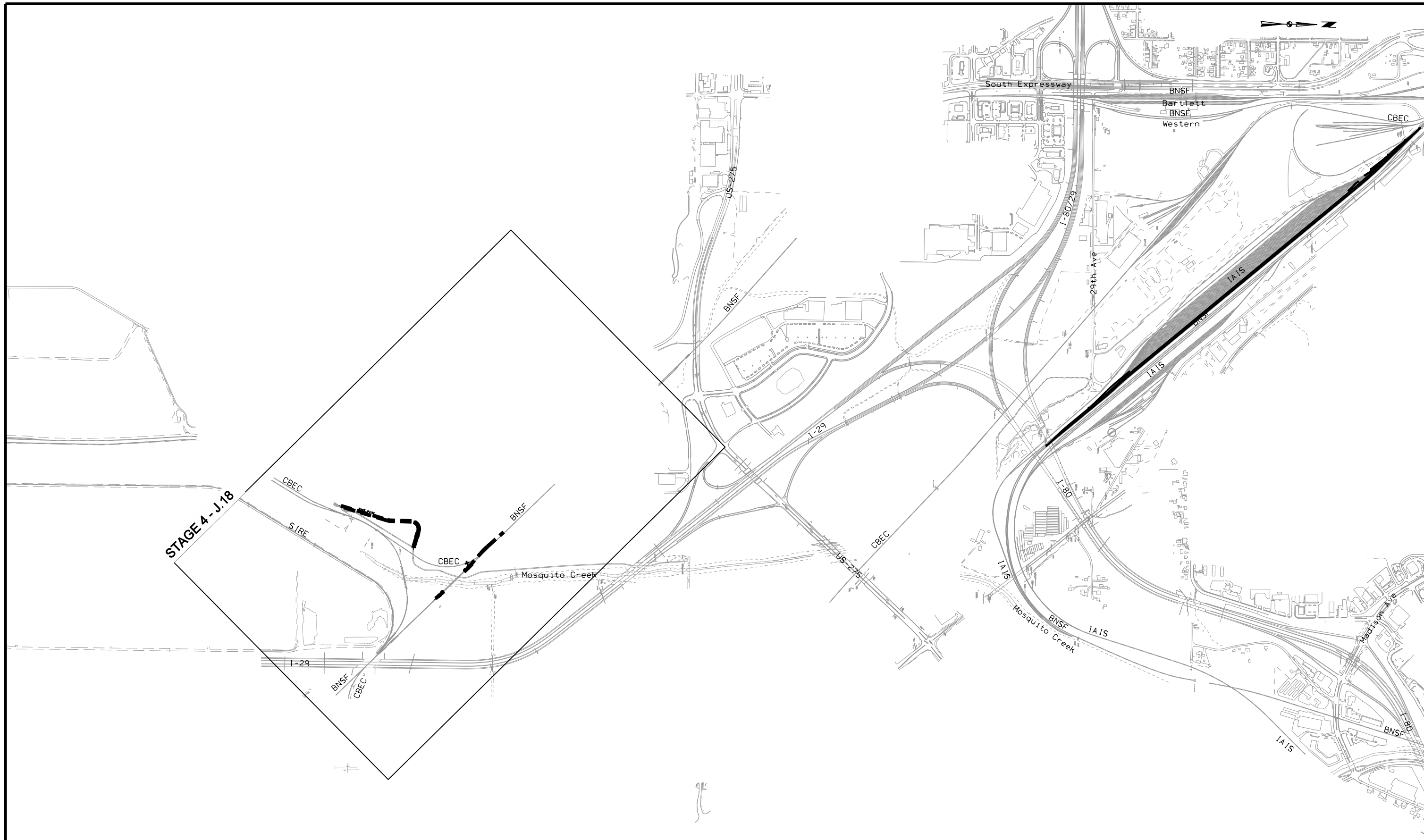
**STAGE 2
CONSTRUCTION PHASING
SHEET LAYOUT**



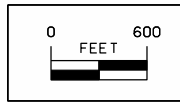
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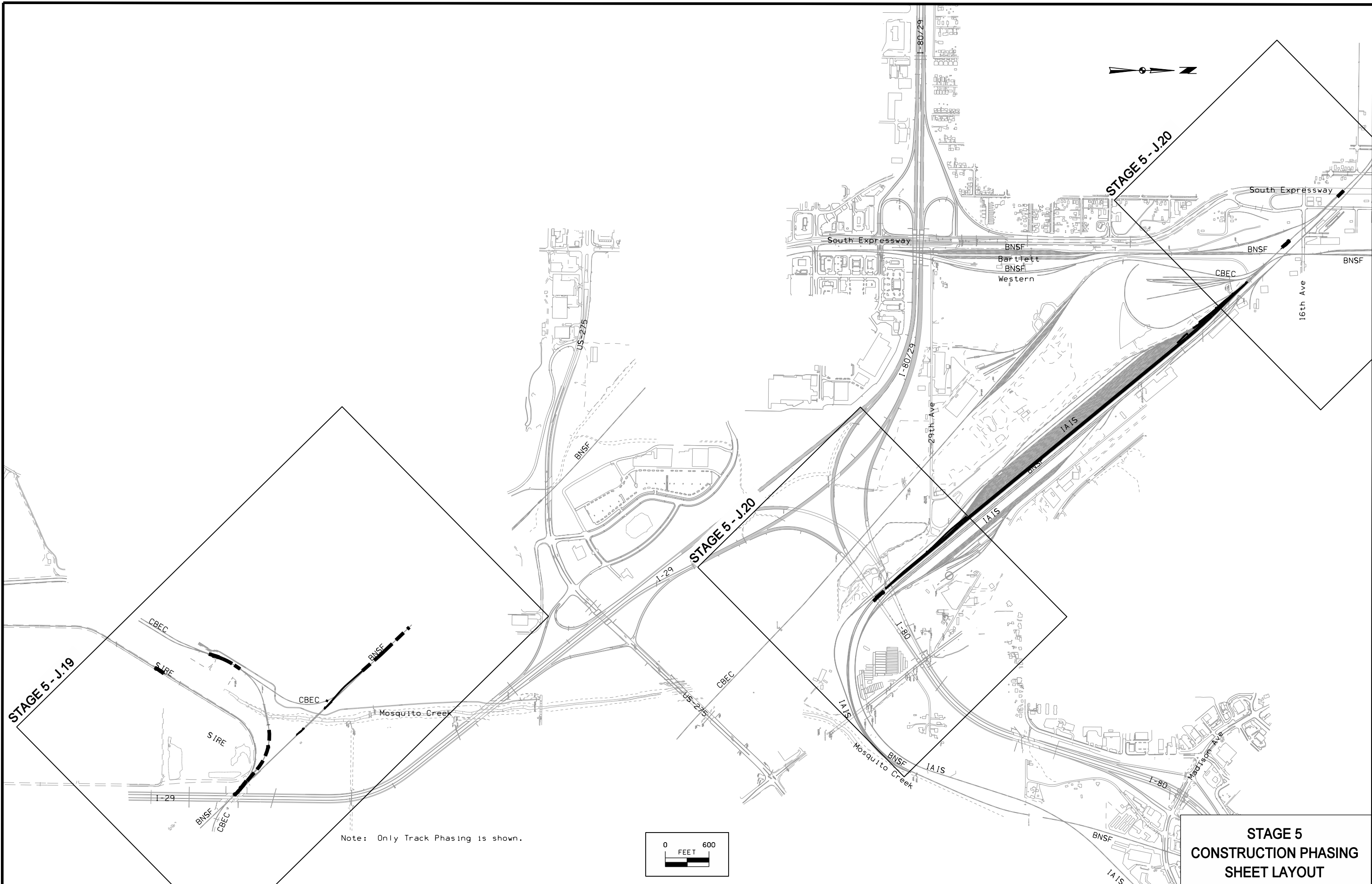
**STAGE 3
CONSTRUCTION PHASING
SHEET LAYOUT**



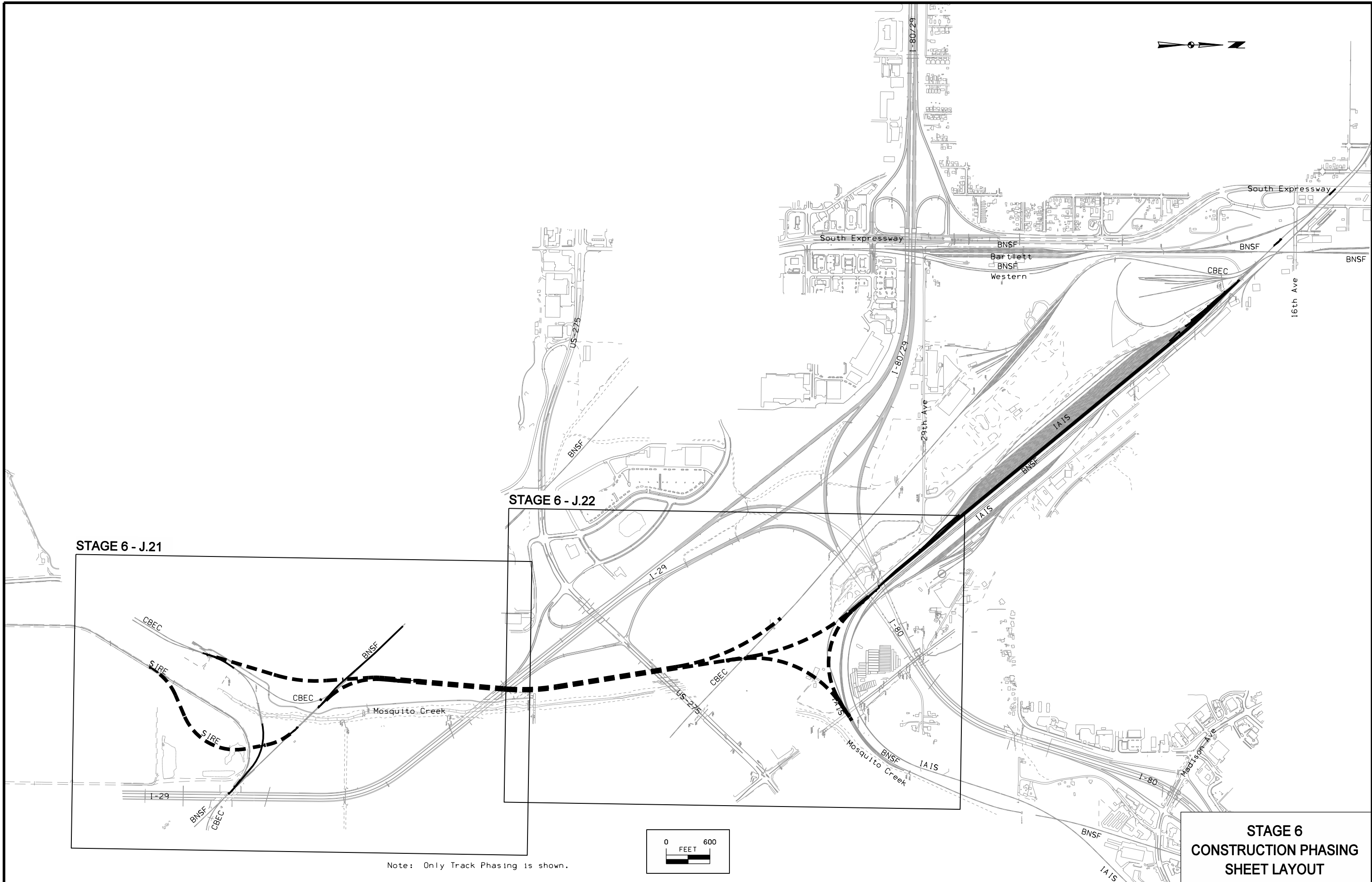
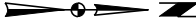
Note: Only Track Phasing is shown.



**STAGE 4
CONSTRUCTION PHASING
SHEET LAYOUT**

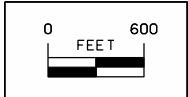
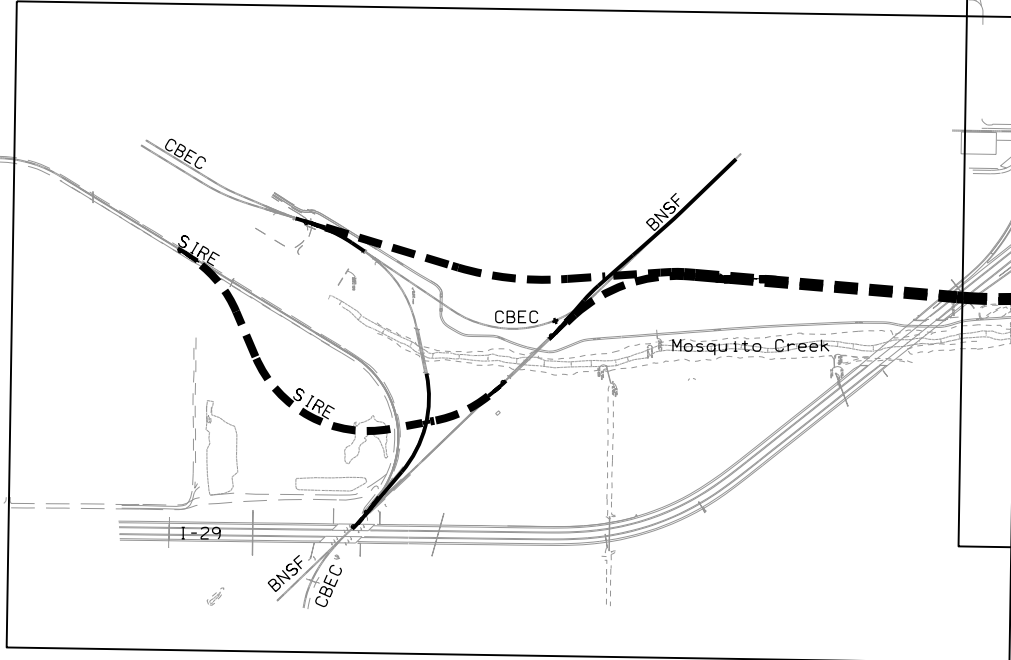


**STAGE 5
CONSTRUCTION PHASING
SHEET LAYOUT**



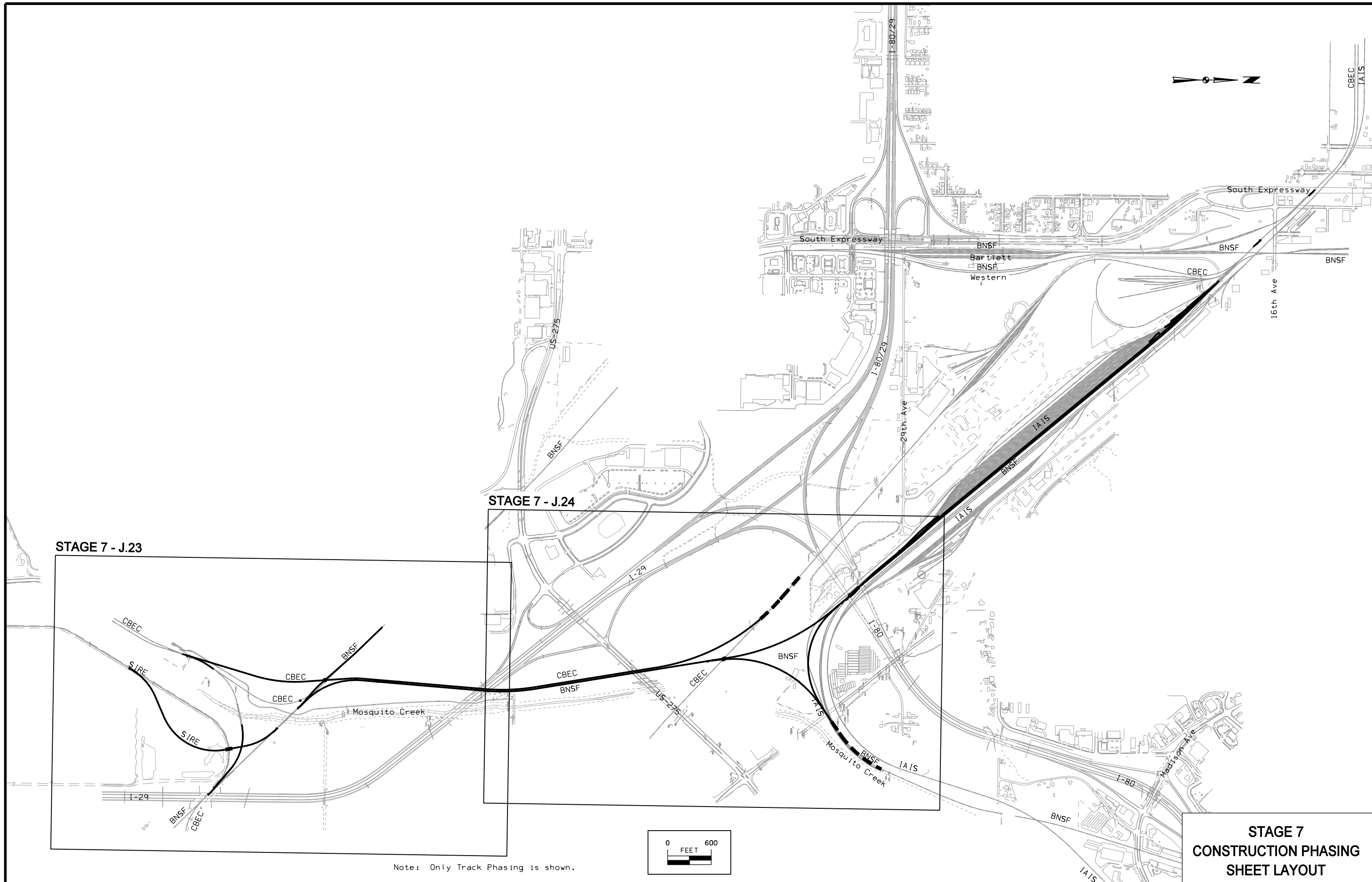
STAGE 6 - J.21

STAGE 6 - J.22



Note: Only Track Phasing is shown.

**STAGE 6
CONSTRUCTION PHASING
SHEET LAYOUT**

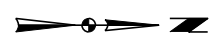
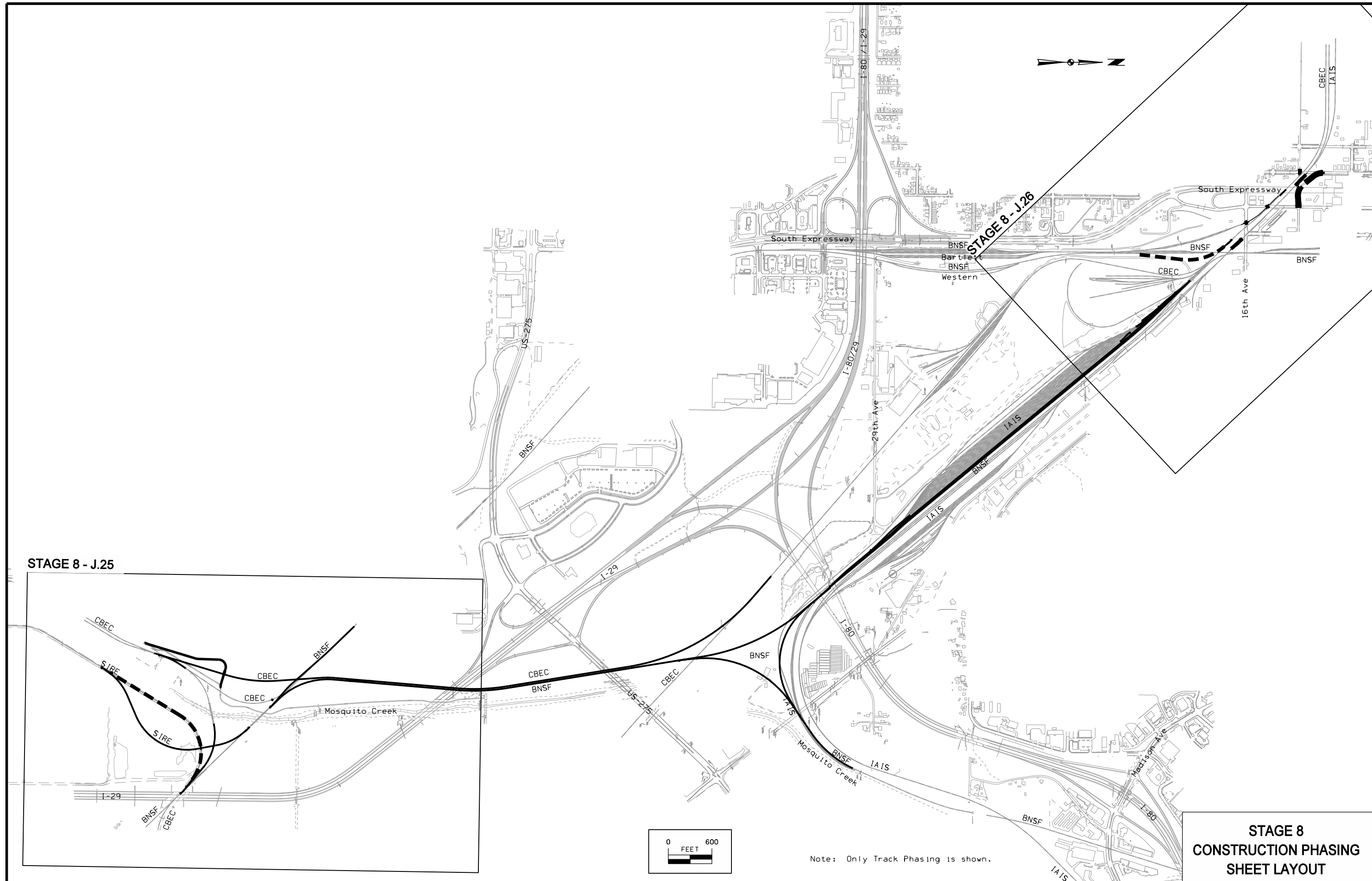


STAGE 7 - J.23

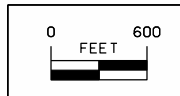
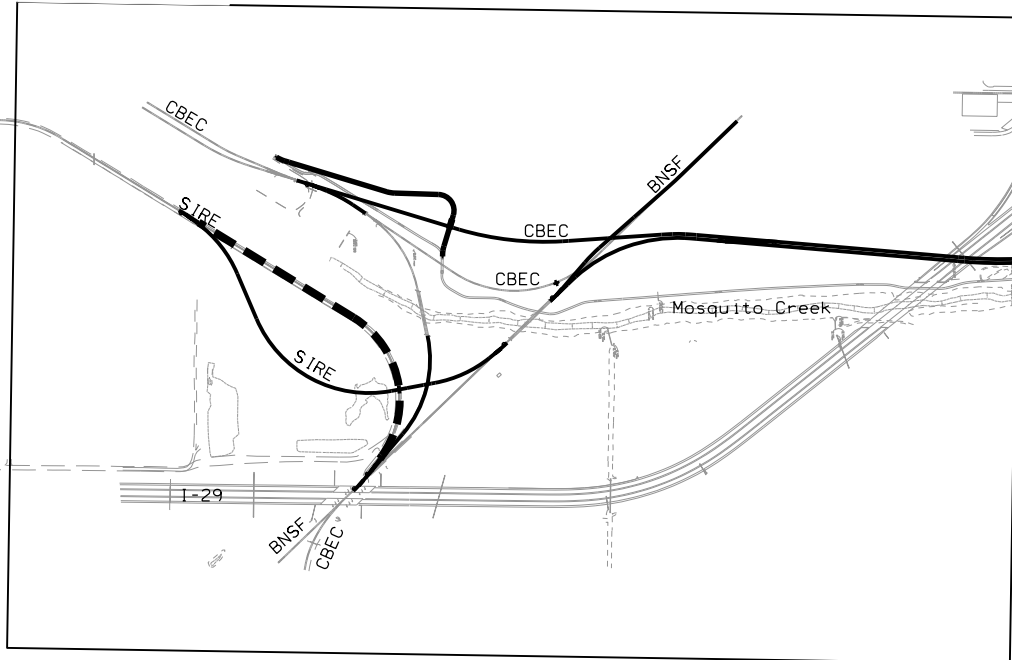
STAGE 7 - J.24

**STAGE 7
CONSTRUCTION PHASING
SHEET LAYOUT**

Note: Only Track Phasing is shown.

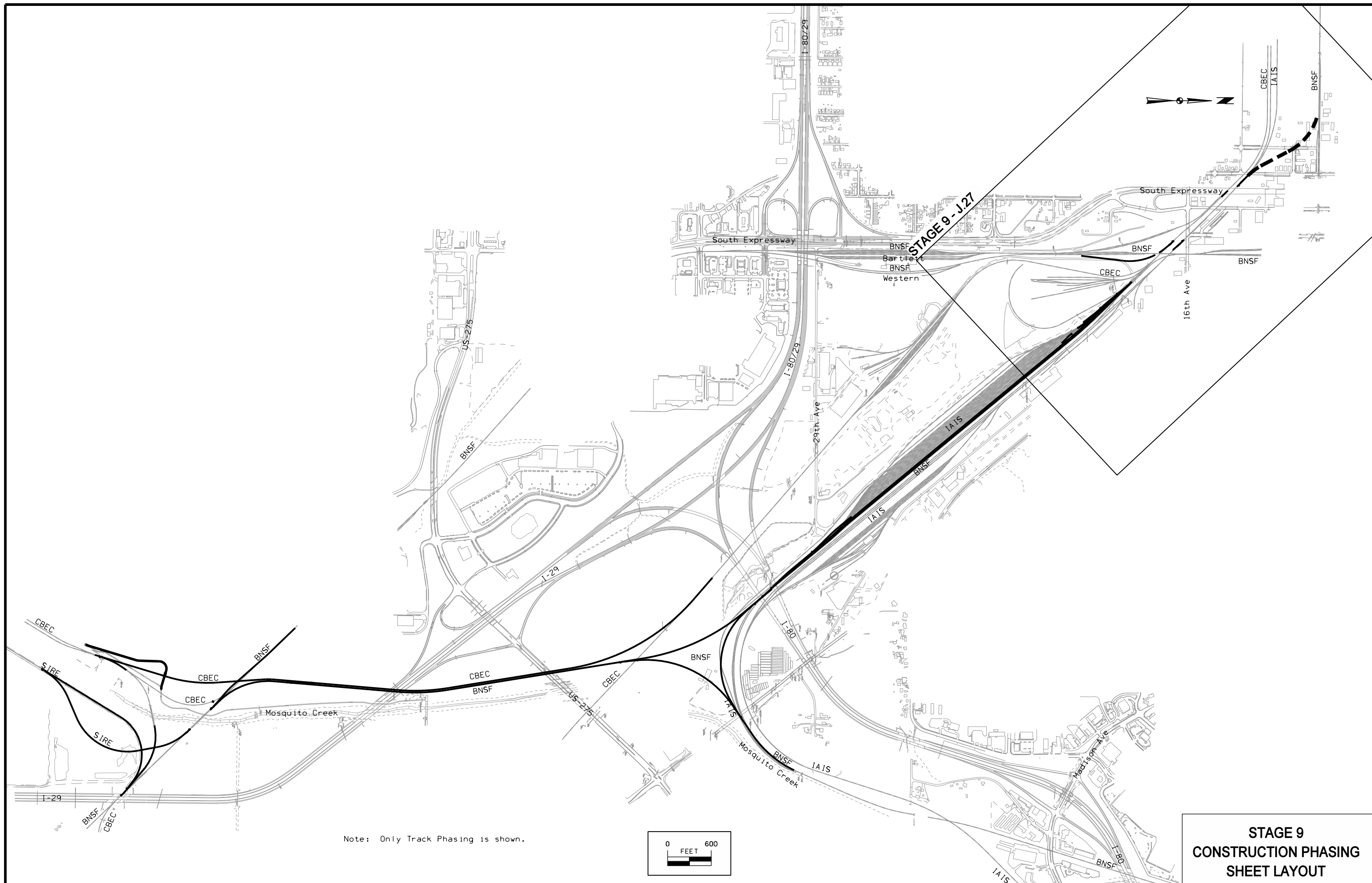


STAGE 8 - J.25

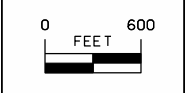


Note: Only Track Phasing is shown.

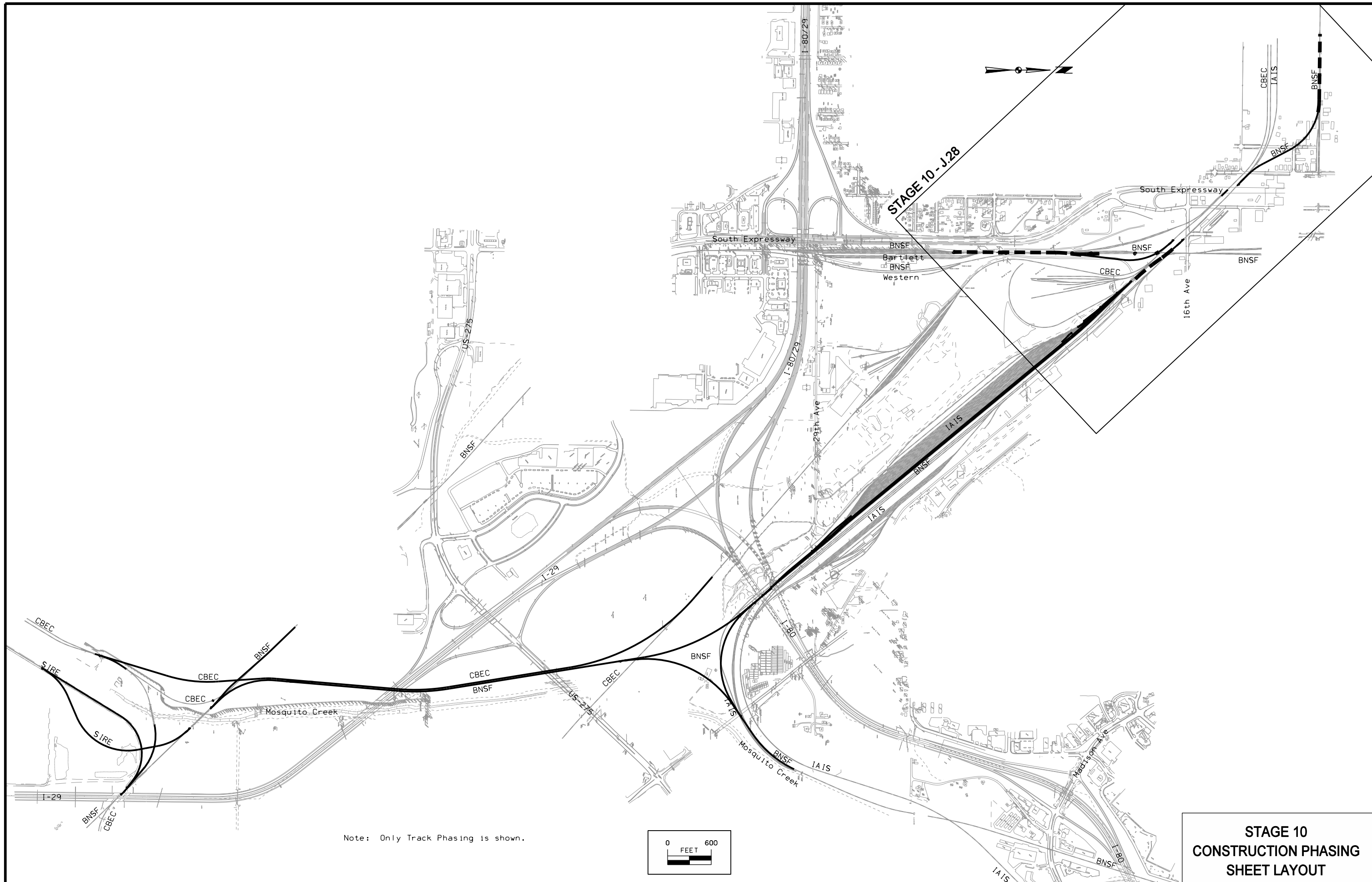
**STAGE 8
CONSTRUCTION PHASING
SHEET LAYOUT**



Note: Only Track Phasing is shown.

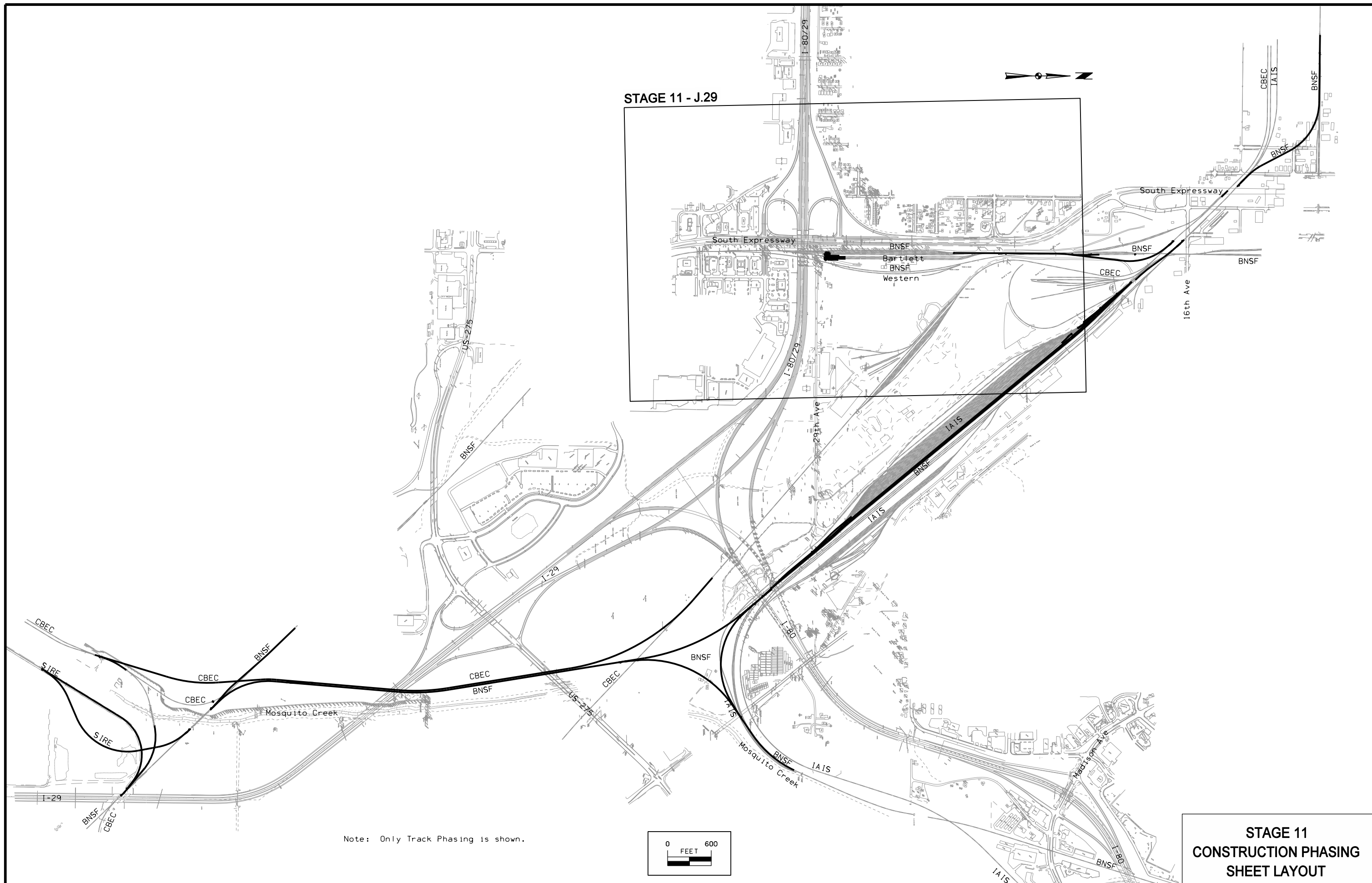


**STAGE 9
CONSTRUCTION PHASING
SHEET LAYOUT**

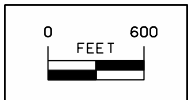


Note: Only Track Phasing is shown.

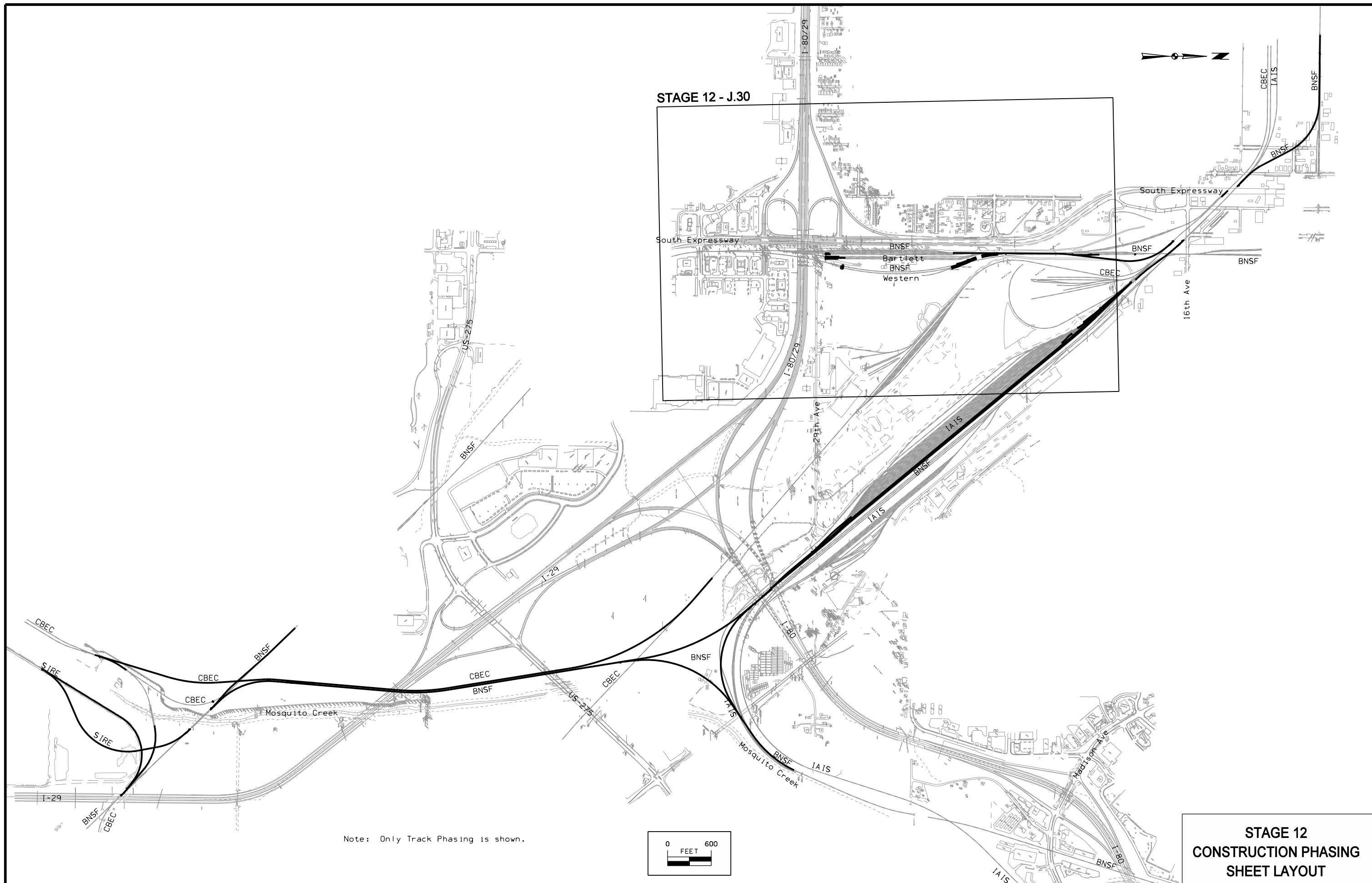
**STAGE 10
CONSTRUCTION PHASING
SHEET LAYOUT**



Note: Only Track Phasing is shown.



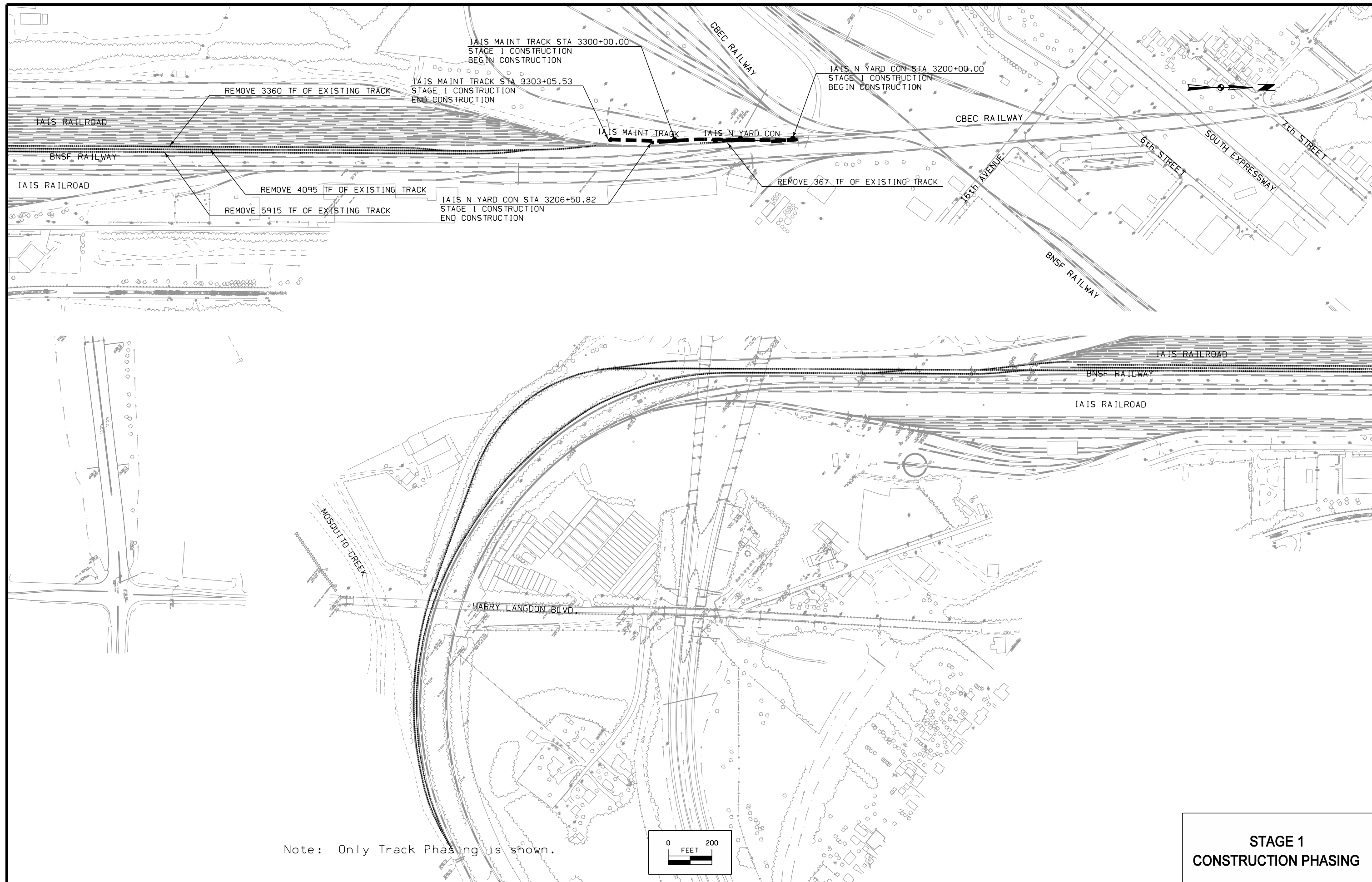
**STAGE 11
CONSTRUCTION PHASING
SHEET LAYOUT**



STAGE 12 - J.30

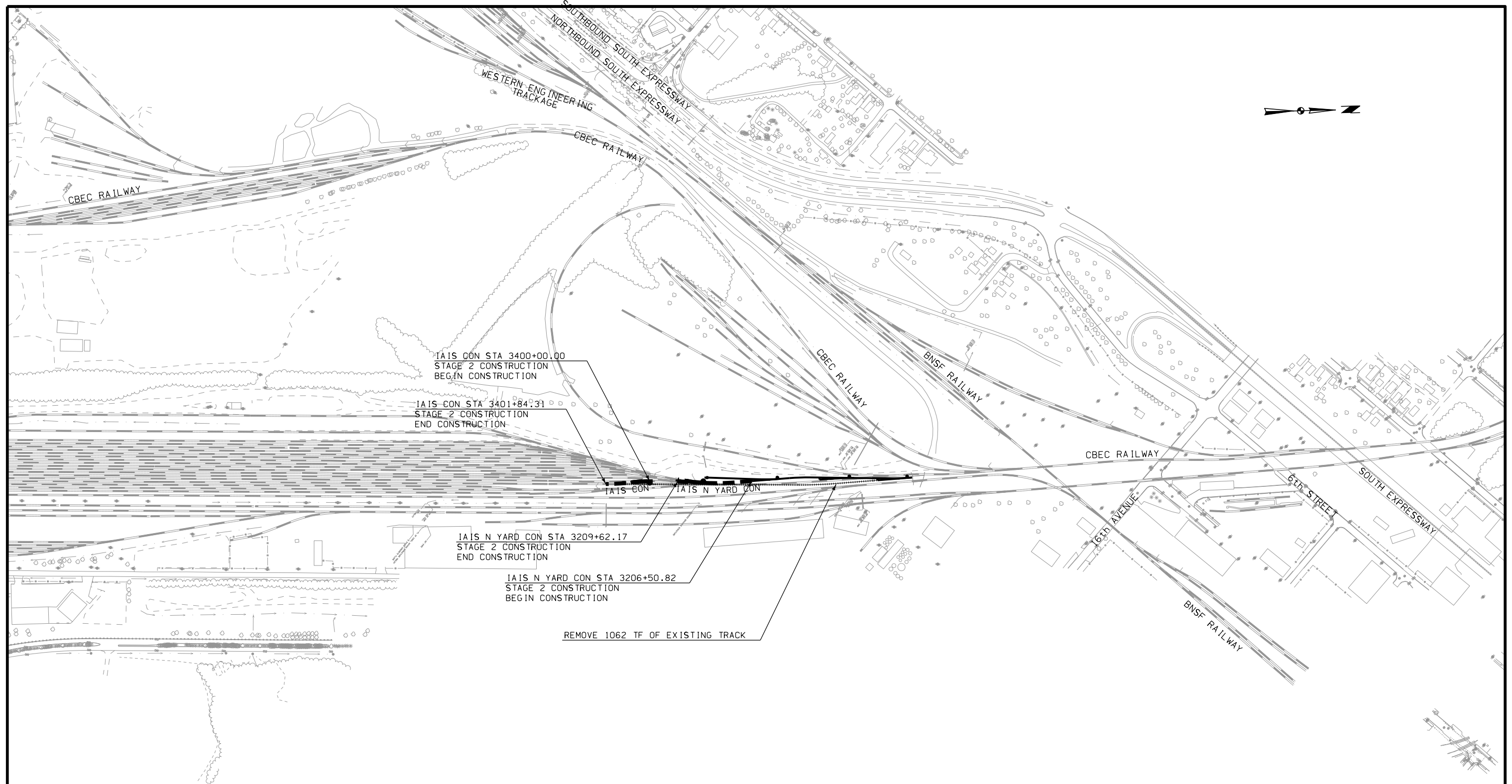
Note: Only Track Phasing is shown.

STAGE 12
CONSTRUCTION PHASING
SHEET LAYOUT

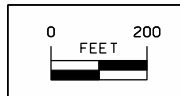


Note: Only Track Phasing is shown.

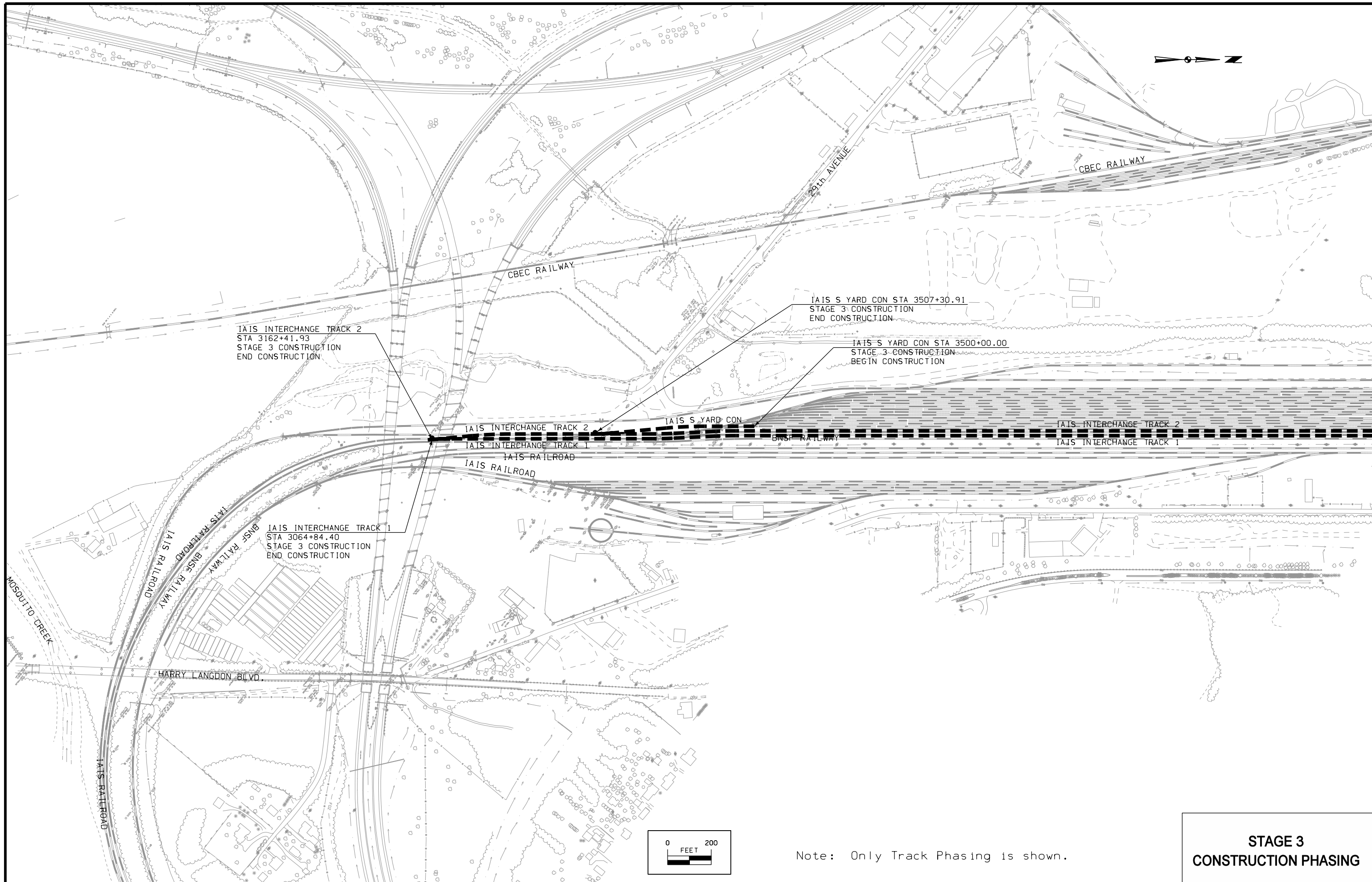
**STAGE 1
CONSTRUCTION PHASING**



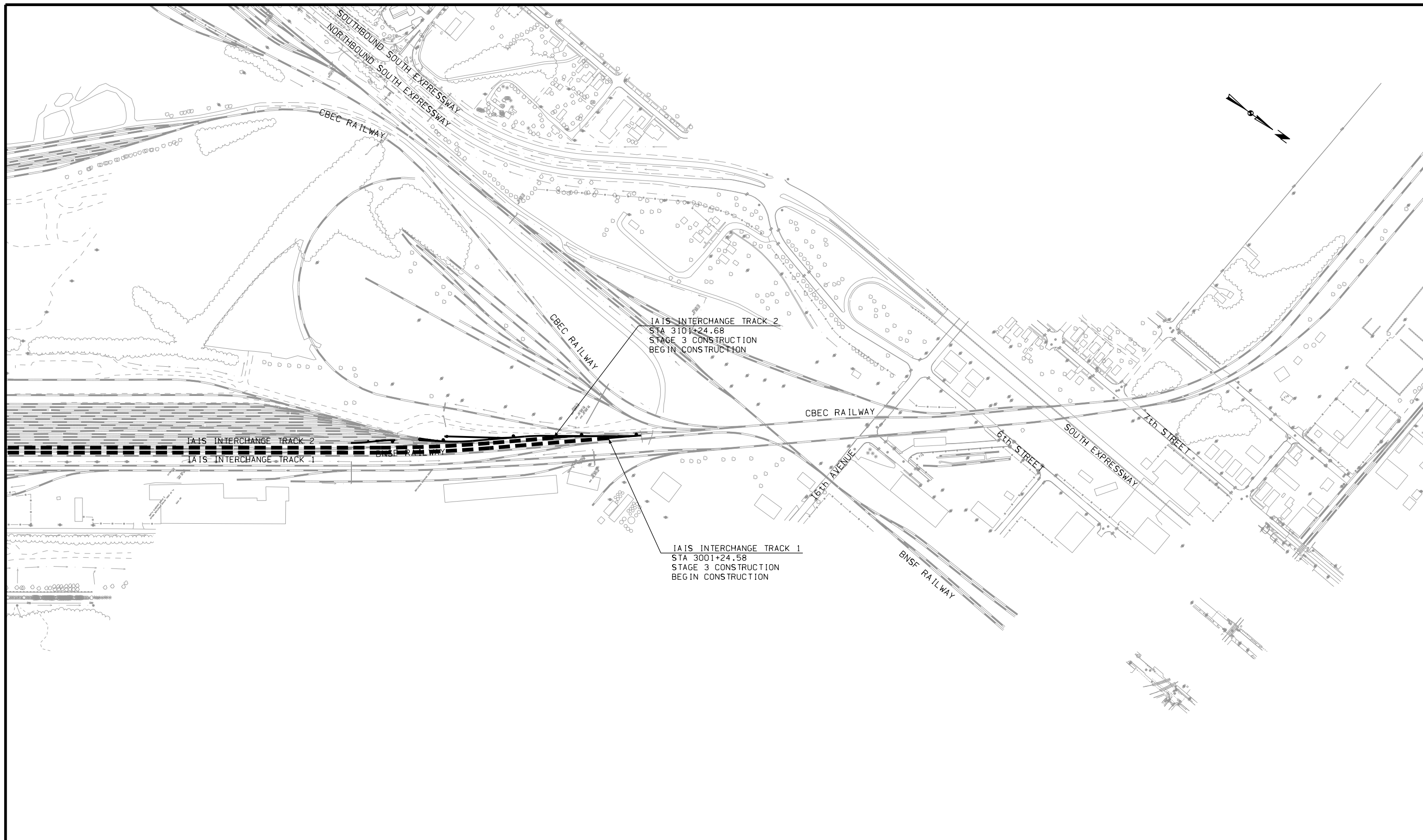
Note: Only Track Phasing is shown.



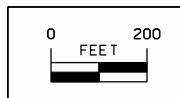
**STAGE 2
CONSTRUCTION PHASING**



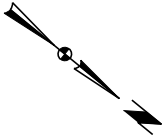
**STAGE 3
CONSTRUCTION PHASING**



Note: Only Track Phasing is shown.



**STAGE 3
CONSTRUCTION PHASING**



BIKE PATH STA 514+14.29
STAGE 4 CONSTRUCTION
END CONSTRUCTION

BIKE PATH STA 500+37.12
STAGE 4 CONSTRUCTION
BEGIN CONSTRUCTION

SIRE TRACK FOR REVISED CBEC ACCESS
STA 4001+24.97
STAGE 4 CONSTRUCTION
END CONSTRUCTION

INSTALL BUMPING POST
AT BNSF ROW LINE

REMOVE 268 TF OF EXISTING TRACK

BNSF CON TO EX COUNCIL BLUFFS SUB
STA 1305+21.44
STAGE 4 CONSTRUCTION
CONSTRUCT TRACK PLUG FOR FUTURE FLANGE BEARING DIAMOND INSTALLATION

BNSF CON TO EX COUNCIL BLUFFS SUB
STA 1307+18.18
STAGE 4 CONSTRUCTION
END CONSTRUCTION

BNSF RAILWAY

BNSF RAILWAY

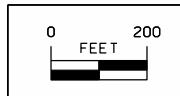
BNSF CON TO EX COUNCIL BLUFFS SUB

BNSF RAILWAY

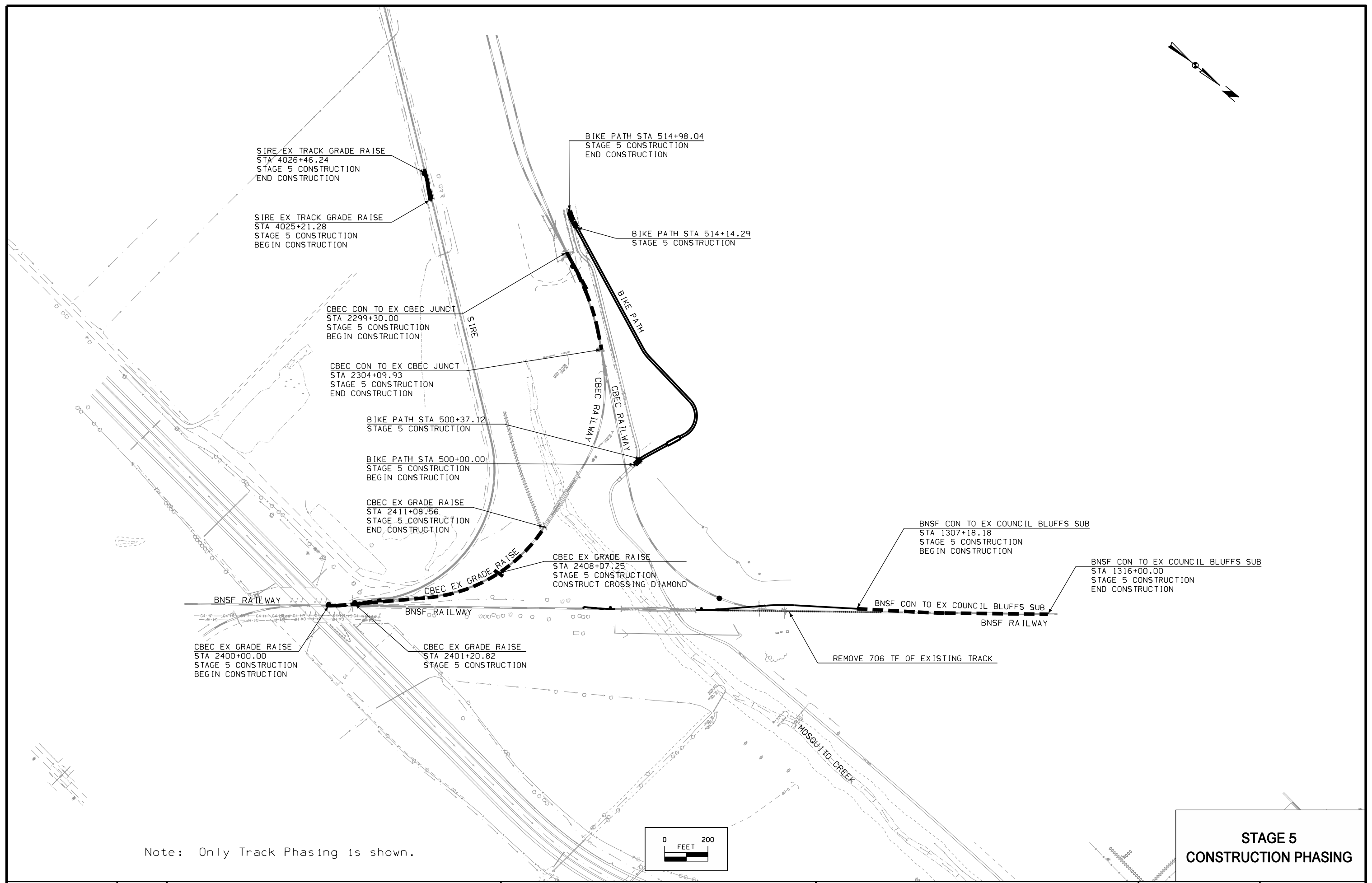
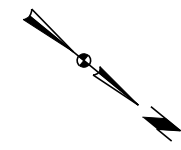
SIRE TRACK FOR REVISED CBEC ACCESS
STA 4000+00.00
STAGE 4 CONSTRUCTION
BEGIN CONSTRUCTION

BNSF CON STA 1300+00.00
STAGE 4 CONSTRUCTION
BEGIN CONSTRUCTION

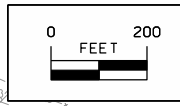
Note: Only Track Phasing is shown.



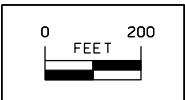
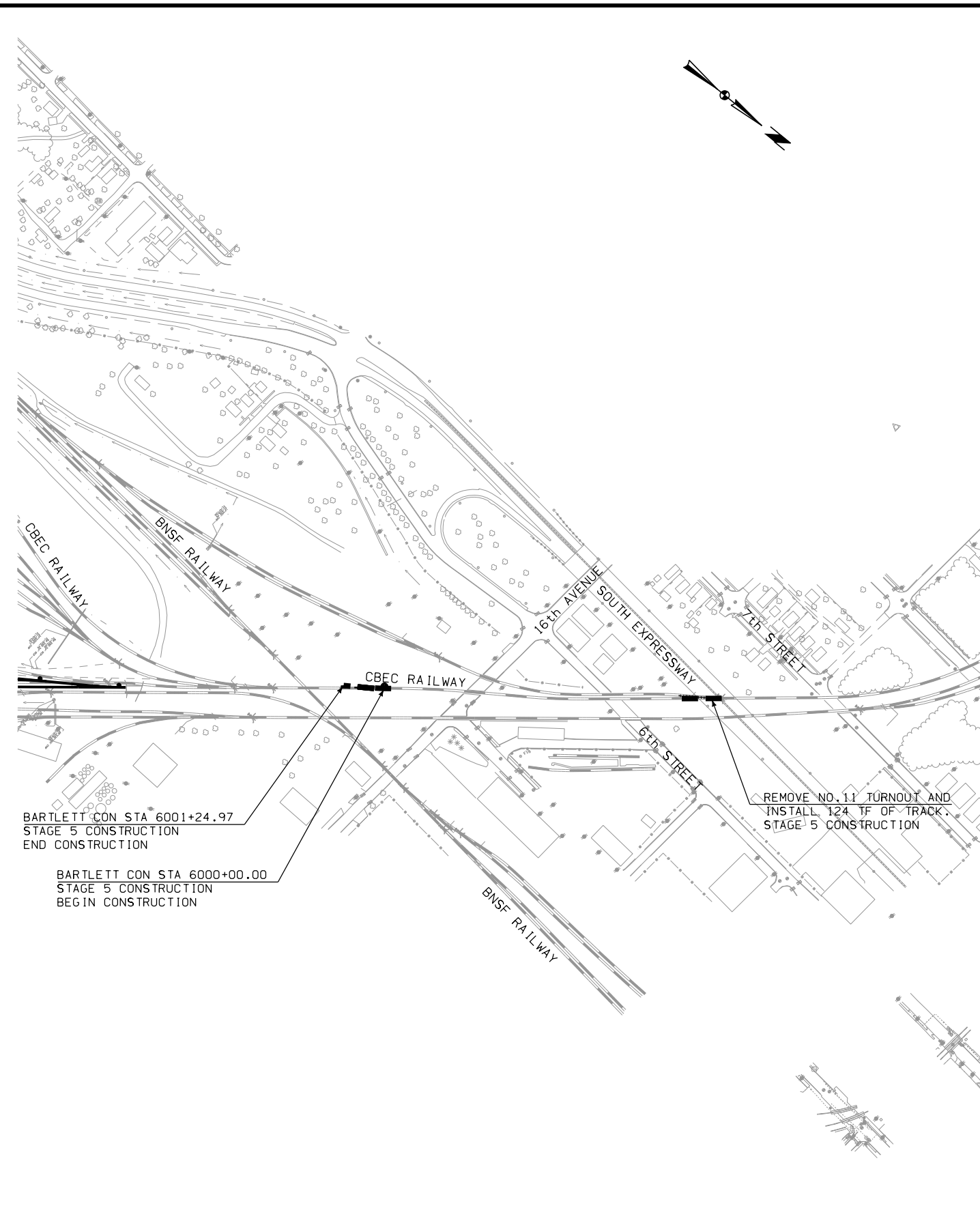
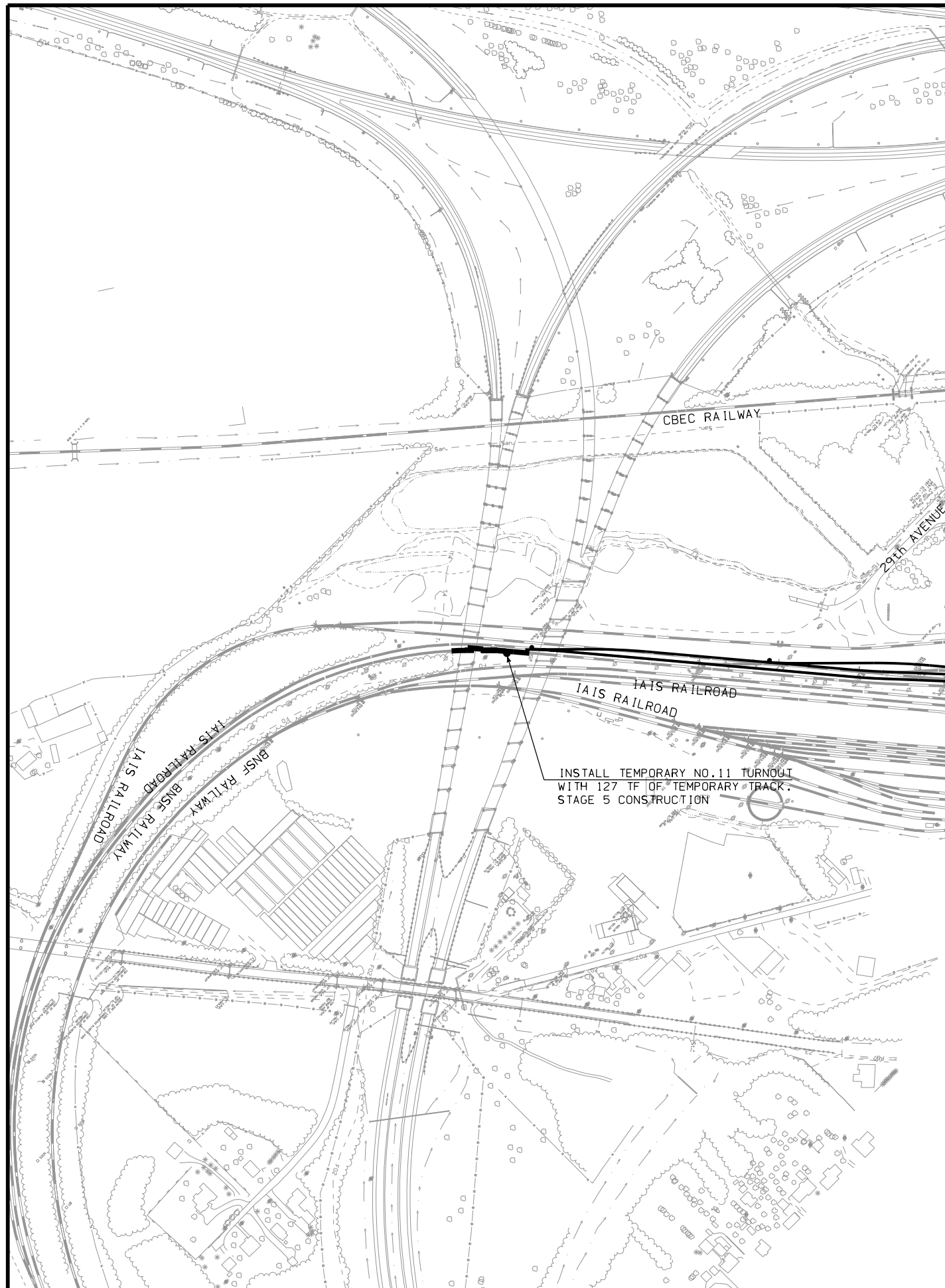
**STAGE 4
CONSTRUCTION PHASING**



Note: Only Track Phasing is shown.

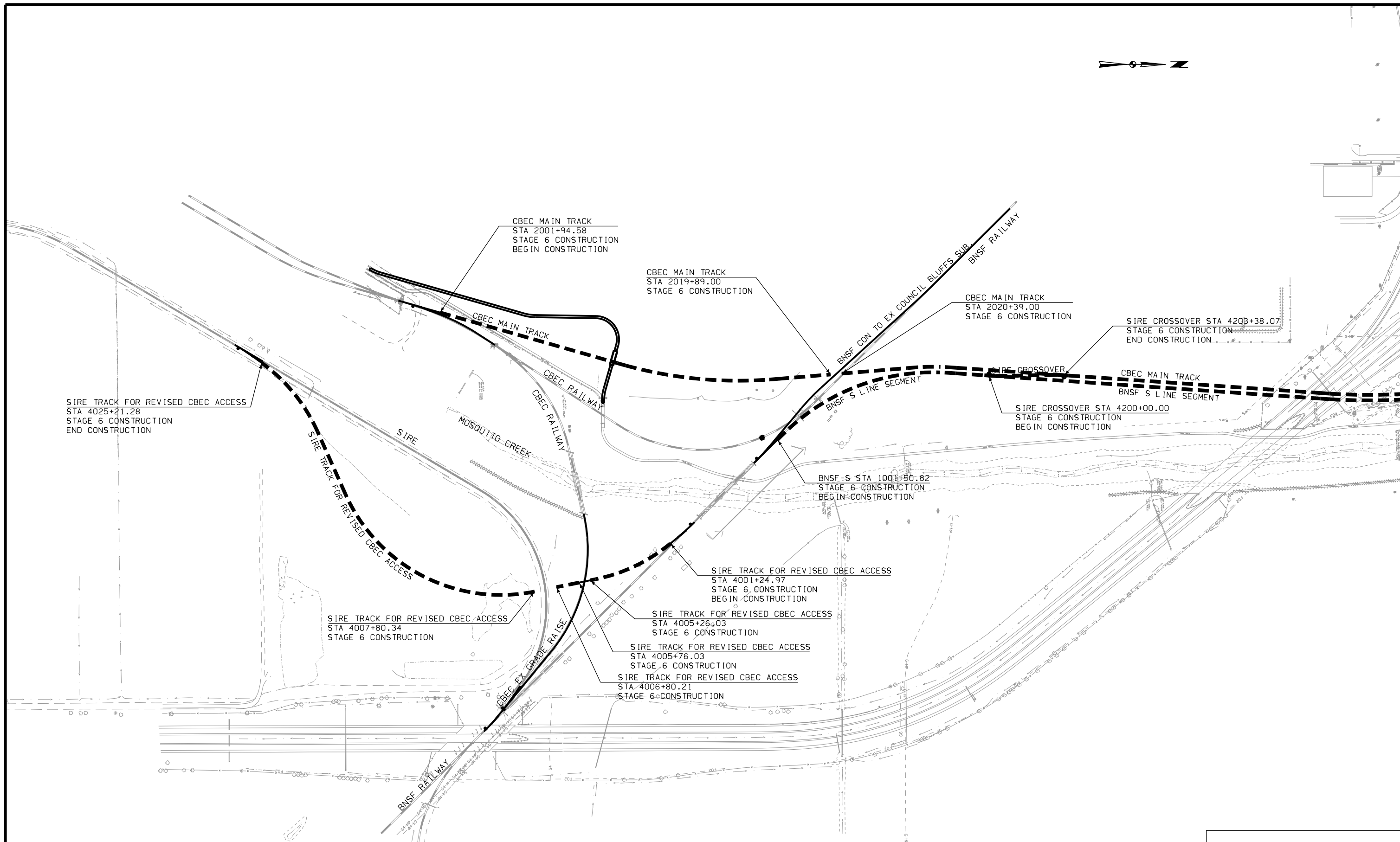
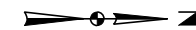


**STAGE 5
CONSTRUCTION PHASING**

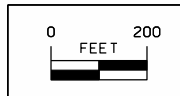


Note: Only Track Phasing is shown.

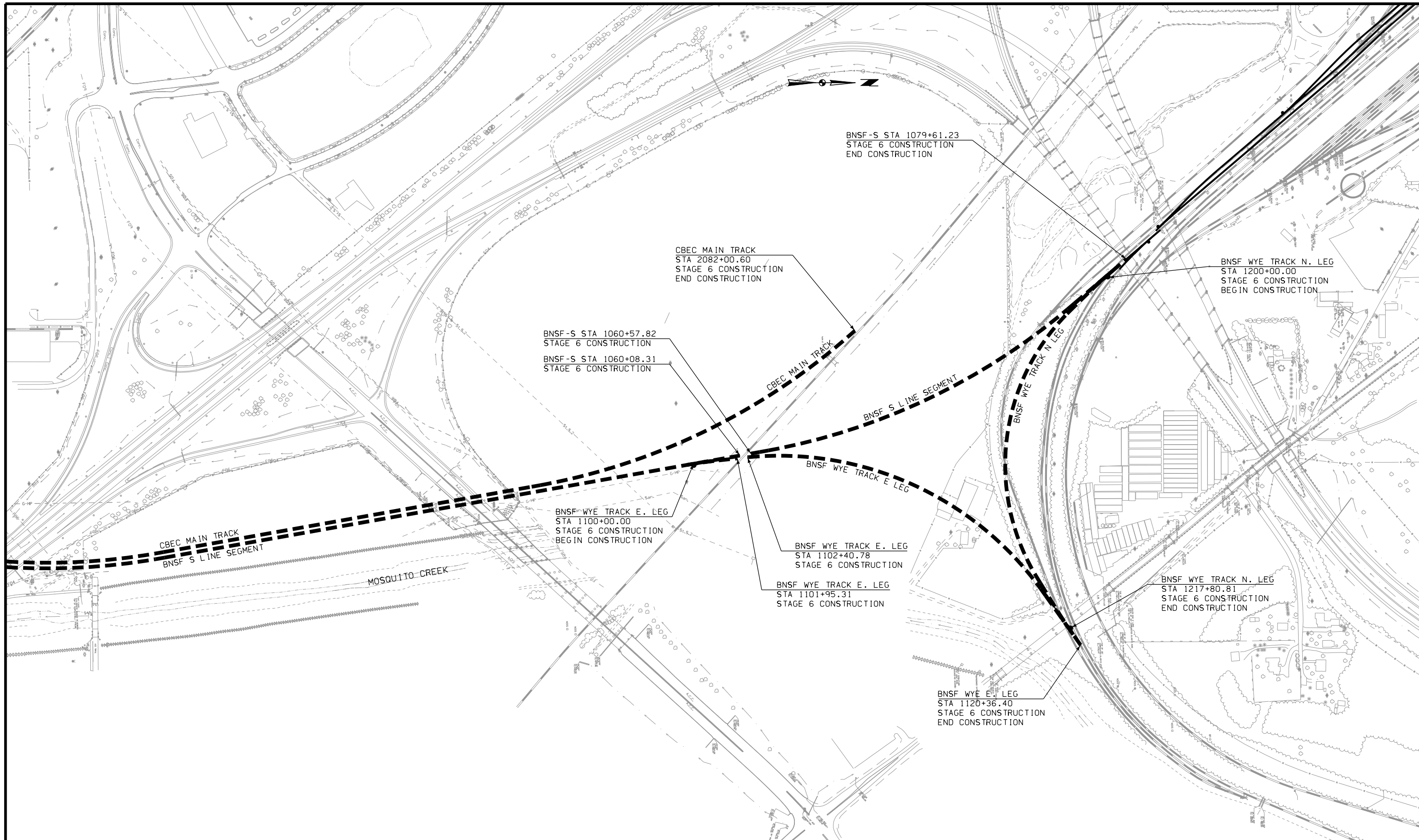
**STAGE 5
CONSTRUCTION PHASING**



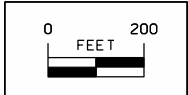
Note: Only Track Phasing is shown.



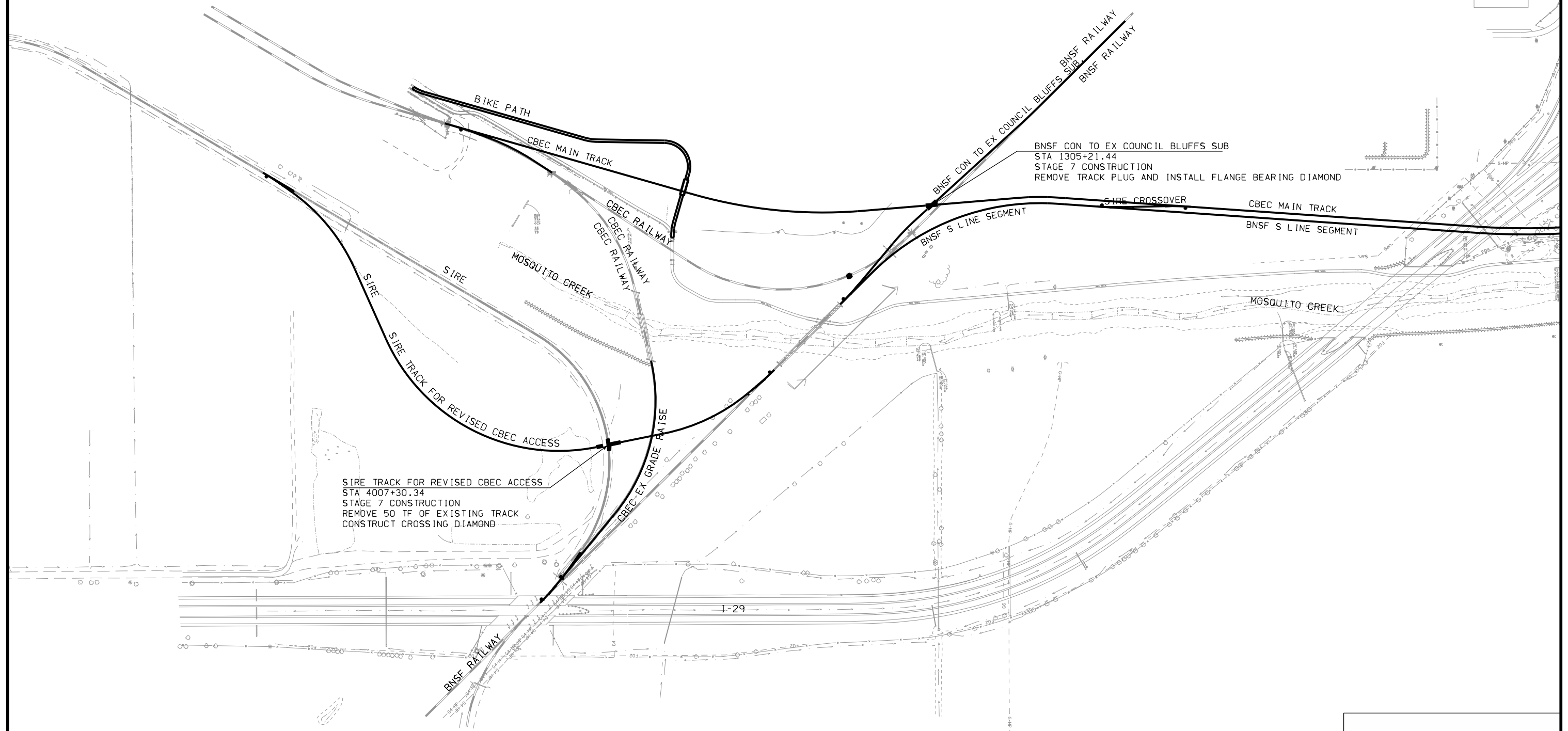
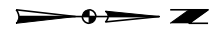
**STAGE 6
CONSTRUCTION PHASING**



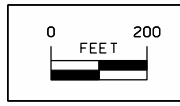
Note: Only Track Phasing is shown.



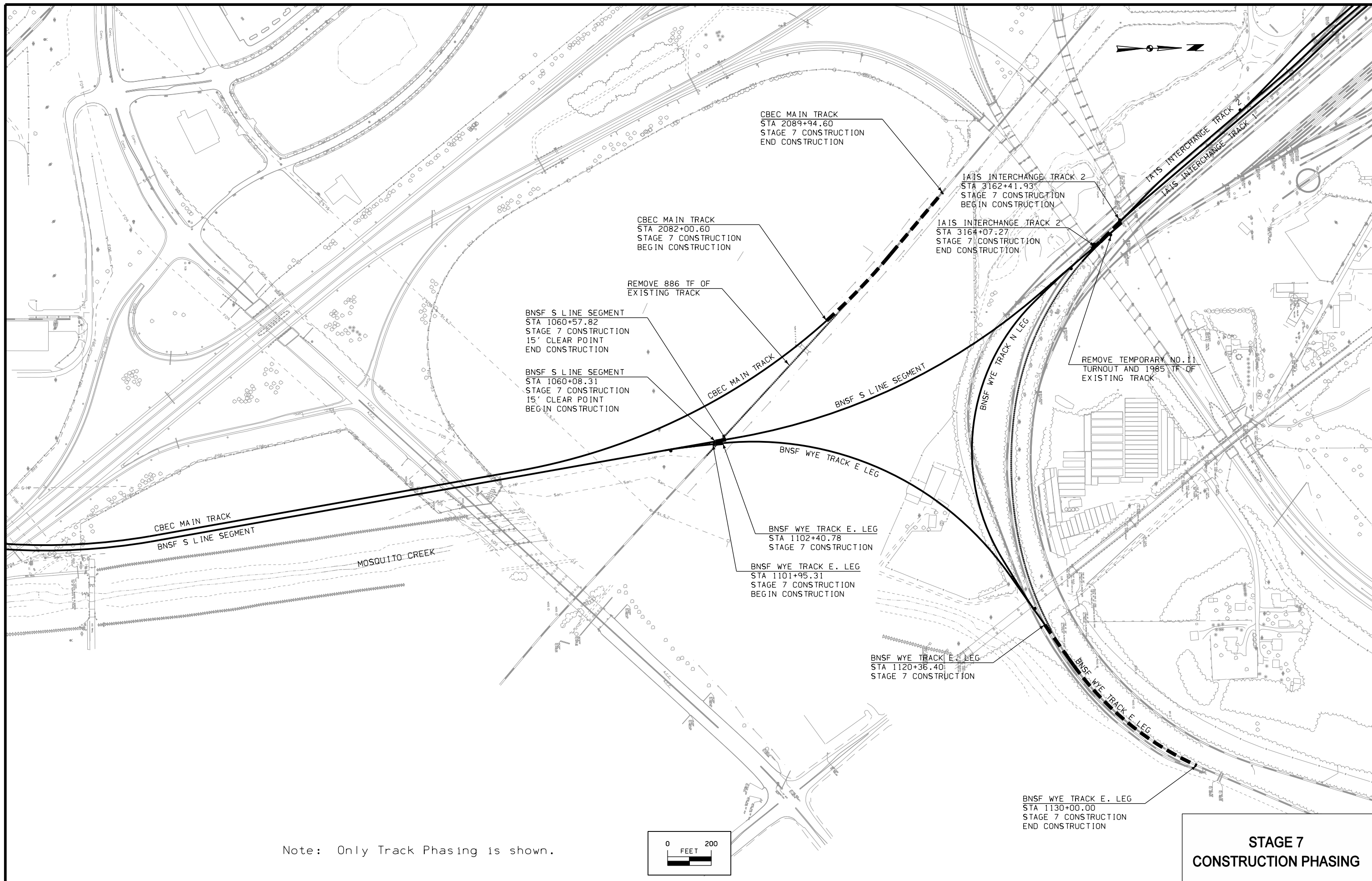
**STAGE 6
CONSTRUCTION PHASING**



Note: Only Track Phasing is shown.

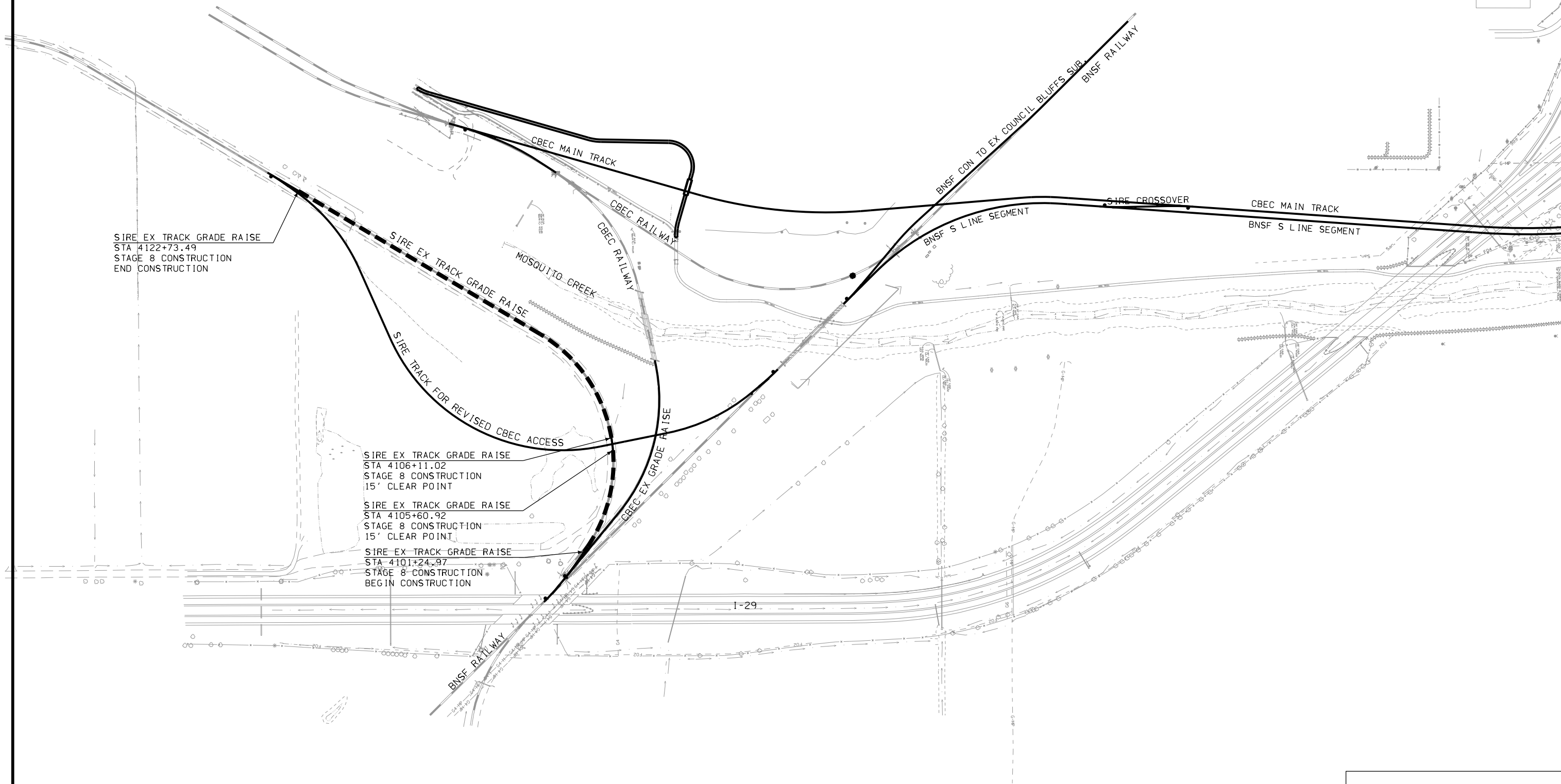
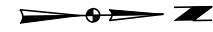


**STAGE 7
CONSTRUCTION PHASING**



FOR SIRE TEMP ALIGNMENT DETAILS
REFER TO SHEETS NO. F.1 & F.12

FOR SIRE TEMP ALIGNMENT CRITICAL SECTION
DETAILS REFER TO SHEET NO. J.34



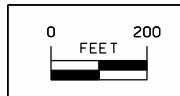
SIRE EX TRACK GRADE RAISE
STA 4122+73.49
STAGE 8 CONSTRUCTION
END CONSTRUCTION

SIRE EX TRACK GRADE RAISE
STA 4106+11.02
STAGE 8 CONSTRUCTION
15' CLEAR POINT

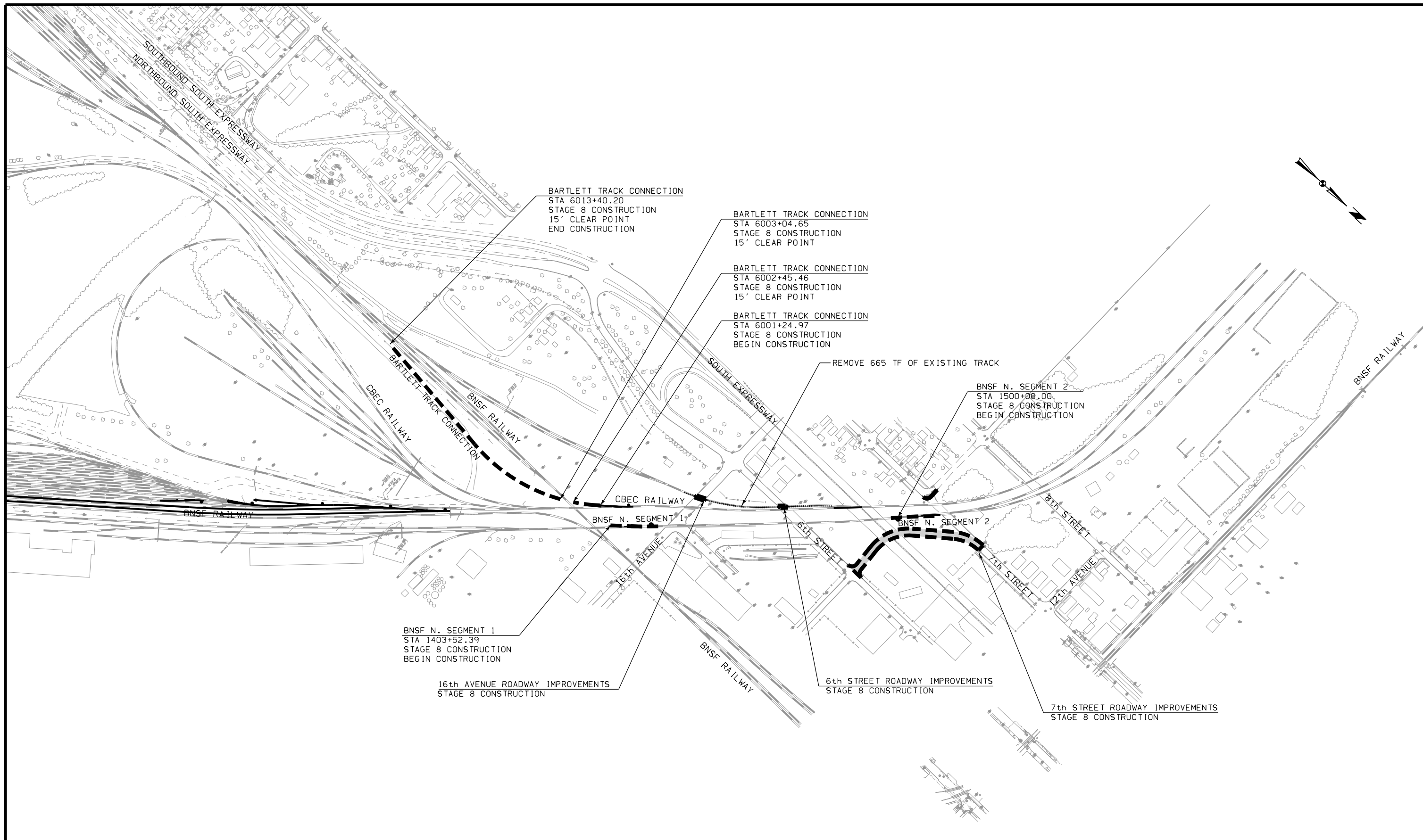
SIRE EX TRACK GRADE RAISE
STA 4105+60.92
STAGE 8 CONSTRUCTION
15' CLEAR POINT

SIRE EX TRACK GRADE RAISE
STA 4101+24.97
STAGE 8 CONSTRUCTION
BEGIN CONSTRUCTION

Note: Only Track Phasing is shown.



**STAGE 8
CONSTRUCTION PHASING**



BARTLETT TRACK CONNECTION
 STA 6013+40.20
 STAGE 8 CONSTRUCTION
 15' CLEAR POINT
 END CONSTRUCTION

BARTLETT TRACK CONNECTION
 STA 6003+04.65
 STAGE 8 CONSTRUCTION
 15' CLEAR POINT

BARTLETT TRACK CONNECTION
 STA 6002+45.46
 STAGE 8 CONSTRUCTION
 15' CLEAR POINT

BARTLETT TRACK CONNECTION
 STA 6001+24.97
 STAGE 8 CONSTRUCTION
 BEGIN CONSTRUCTION

REMOVE 665 TF OF EXISTING TRACK

BNSF N. SEGMENT 2
 STA 1500+00.00
 STAGE 8 CONSTRUCTION
 BEGIN CONSTRUCTION

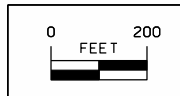
BNSF N. SEGMENT 1
 STA 1403+52.39
 STAGE 8 CONSTRUCTION
 BEGIN CONSTRUCTION

16th AVENUE ROADWAY IMPROVEMENTS
 STAGE 8 CONSTRUCTION

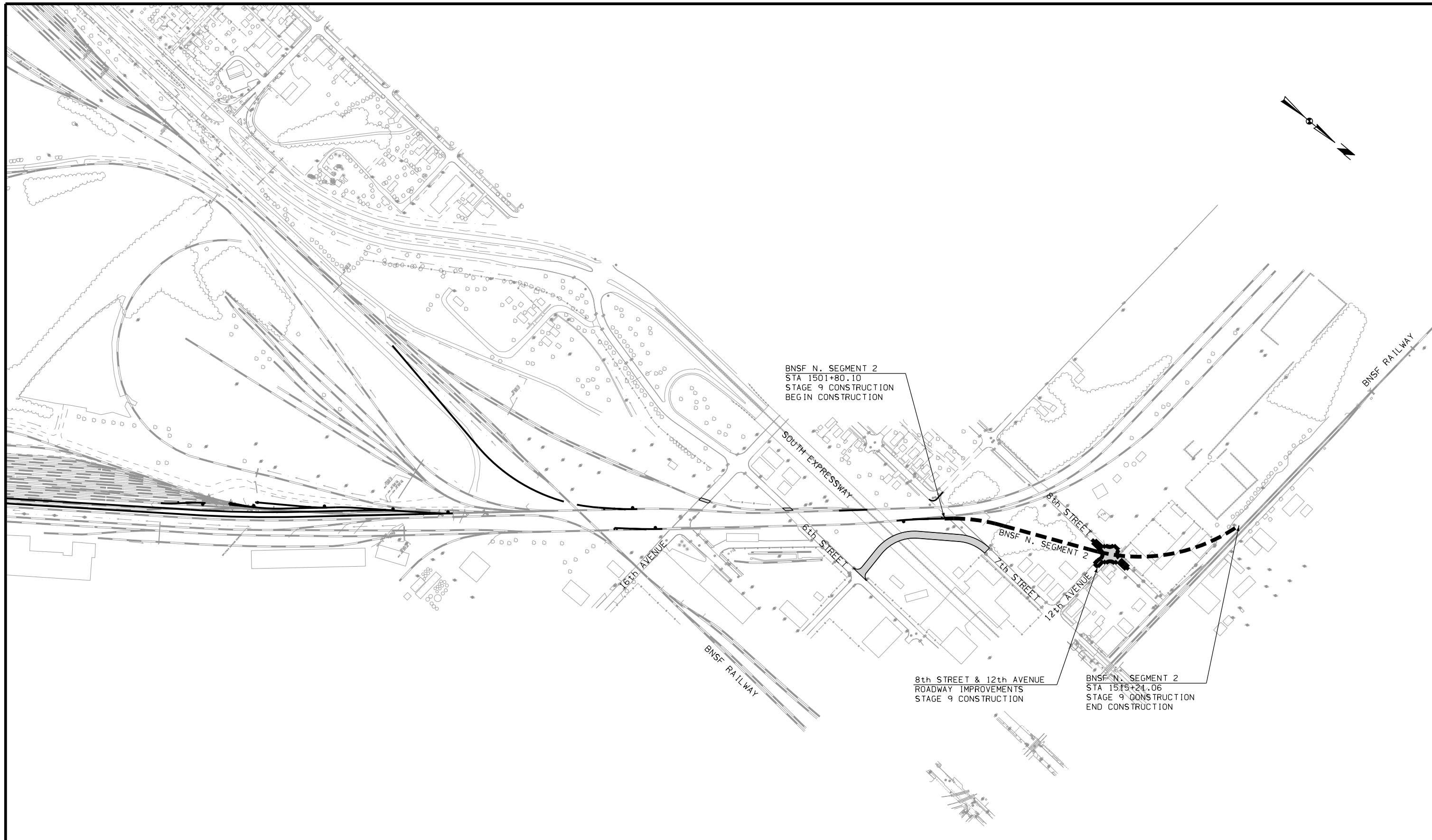
6th STREET ROADWAY IMPROVEMENTS
 STAGE 8 CONSTRUCTION

7th STREET ROADWAY IMPROVEMENTS
 STAGE 8 CONSTRUCTION

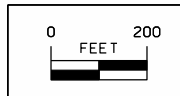
Note: Only Track Phasing is shown.



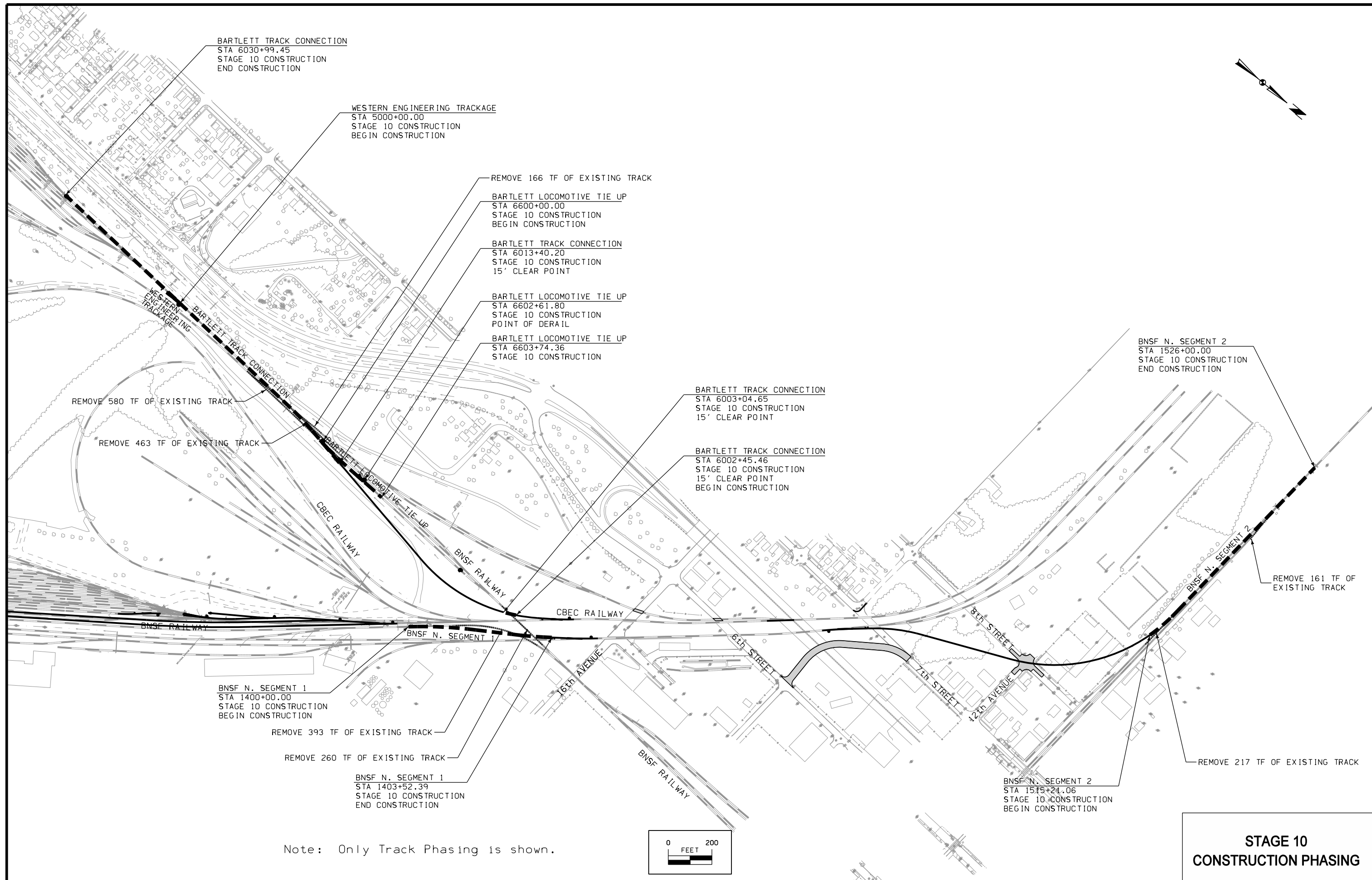
**STAGE 8
 CONSTRUCTION PHASING**

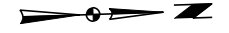


Note: Only Track Phasing is shown.



**STAGE 9
CONSTRUCTION PHASING**



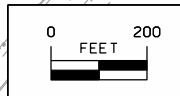


- REMOVE 445 TF OF EXISTING TRACK
- REMOVE 500 TF OF EXISTING TRACK
- REMOVE 362 TF OF EXISTING TRACK
- REMOVE 40 TF OF EXISTING TRACK

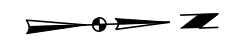
SEE SHEET D.72 THRU D.76 FOR BARTLETT
TRACK 1 THRU BARTLETT TRACK 5.
PHASE 11 CONSTRUCTION

- REMOVE 53 TF OF EXISTING TRACK
- REMOVE 116 TF OF EXISTING TRACK
- REMOVE 600 TF OF EXISTING TRACK

Note: Only Track Phasing is shown.



**STAGE 11
CONSTRUCTION PHASING**



WESTERN ENGINEERING TRACK 2
STA 6001+72.21
STAGE 12 CONSTRUCTION
END CONSTRUCTION

WESTERN ENGINEERING TRACK 2
STA 6000+00.00
STAGE 12 CONSTRUCTION
BEGIN CONSTRUCTION

WESTERN ENGINEERING TRACKAGE
STA 5001+07.85
STAGE 12 CONSTRUCTION
BEGIN CONSTRUCTION

SOUTHBOUND SOUTH EXPRESSWAY
NORTHBOUND SOUTH EXPRESSWAY

BNSF RAILWAY

WESTERN ENGINEERING TRACK 2

WESTERN ENGINEERING TRACKAGE

CBEC RAILWAY

CBEC RAILWAY

INSTALL BUMPING POST

REMOVE 208 TF OF EXISTING TRACK

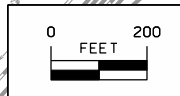
REMOVE 696 TF OF EXISTING TRACK

WESTERN ENGINEERING TRACKAGE
STA 5008+25.54
STAGE 12 CONSTRUCTION
END CONSTRUCTION

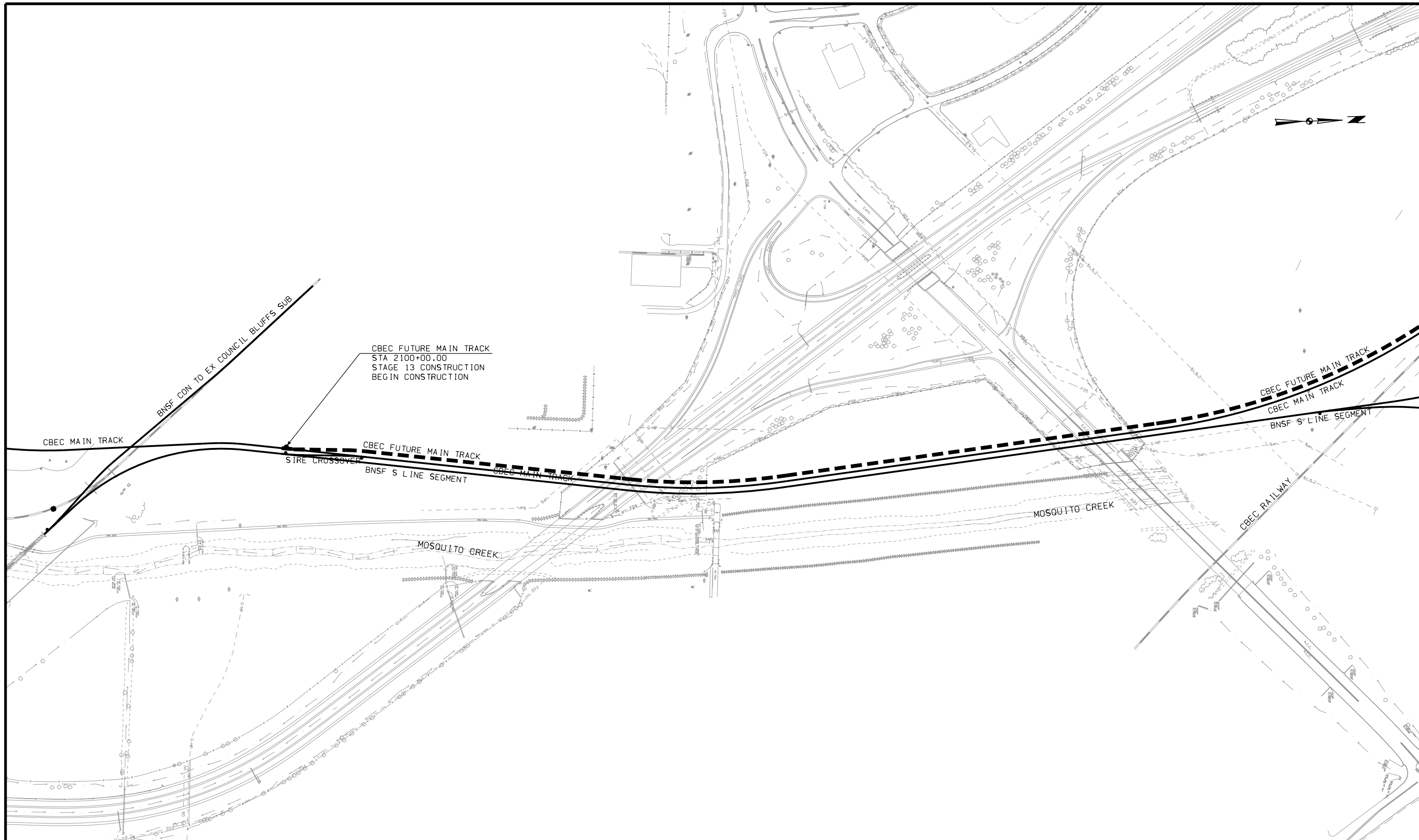
REMOVE 88 TF OF EXISTING TRACK

REMOVE 573 TF OF EXISTING TRACK

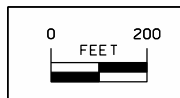
Note: Only Track Phasing is shown.



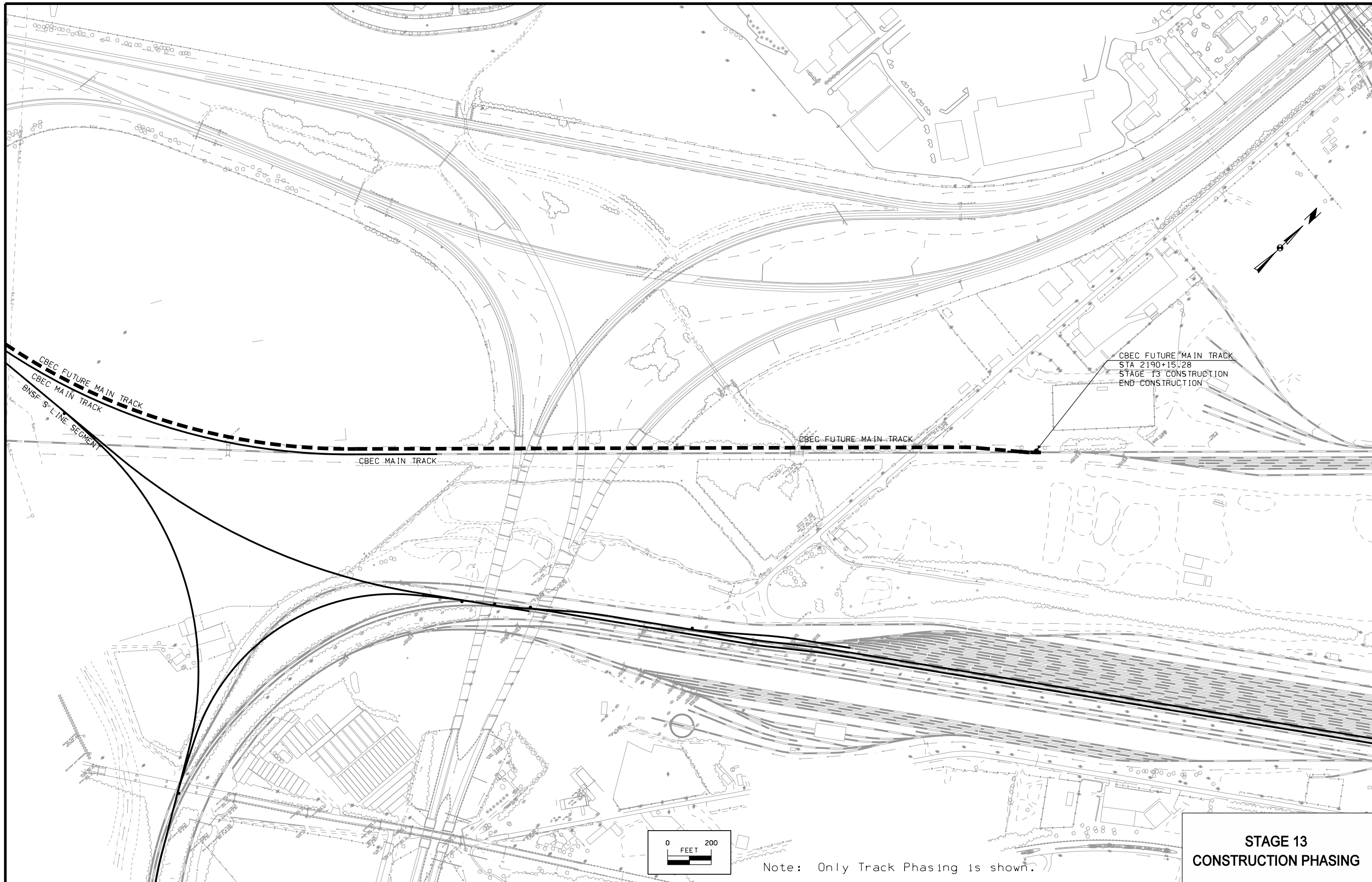
**STAGE 12
CONSTRUCTION PHASING**



Note: Only Track Phasing is shown.

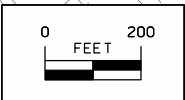


**STAGE 13
CONSTRUCTION PHASING**

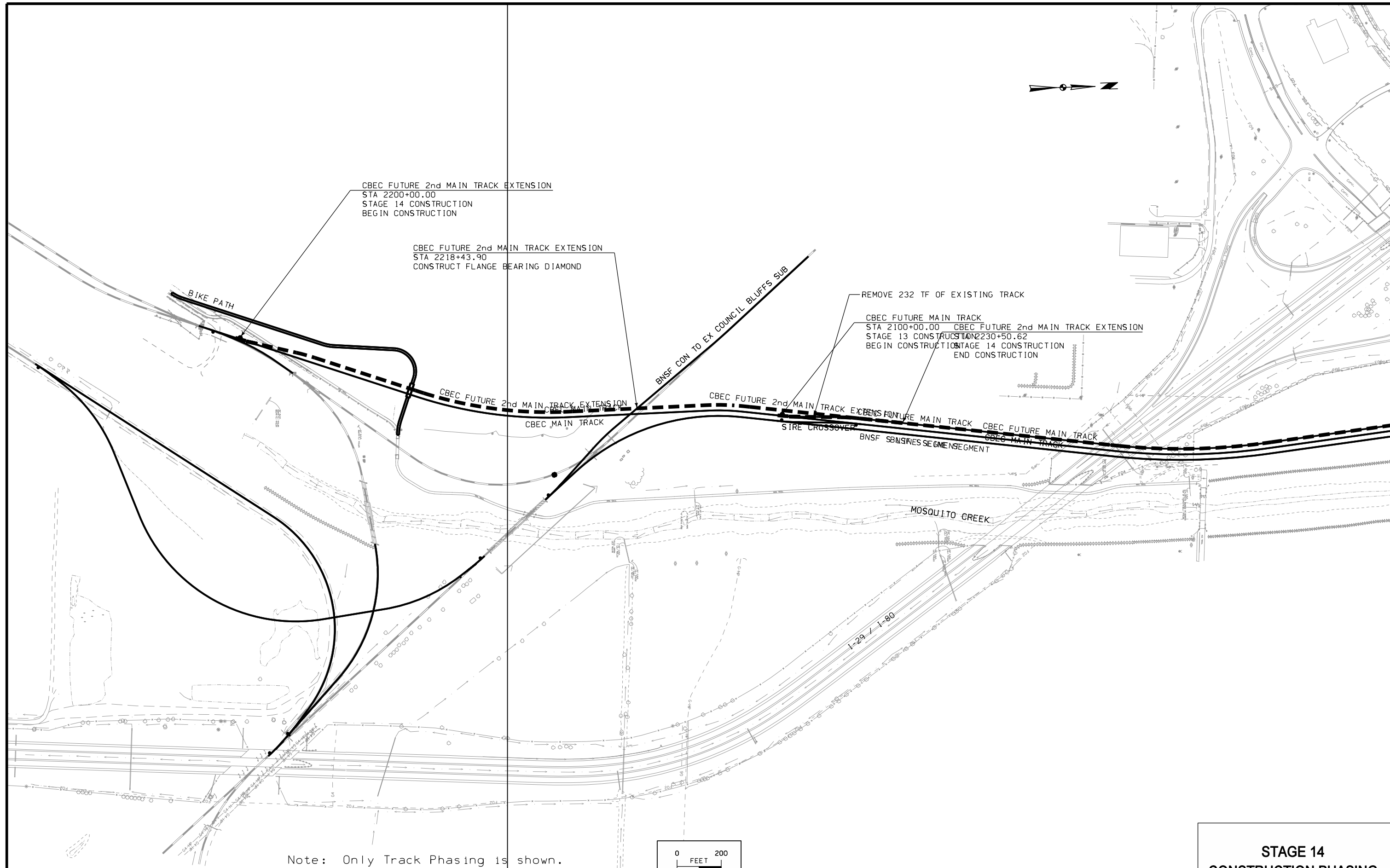


CBEC FUTURE MAIN TRACK
 STA 2190+15.28
 STAGE 13 CONSTRUCTION
 END CONSTRUCTION

**STAGE 13
 CONSTRUCTION PHASING**



Note: Only Track Phasing is shown.



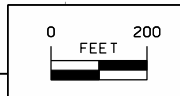
CBEC FUTURE 2nd MAIN TRACK EXTENSION
 STA 2200+00.00
 STAGE 14 CONSTRUCTION
 BEGIN CONSTRUCTION

CBEC FUTURE 2nd MAIN TRACK EXTENSION
 STA 2218+43.90
 CONSTRUCT FLANGE BEARING DIAMOND

REMOVE 232 TF OF EXISTING TRACK

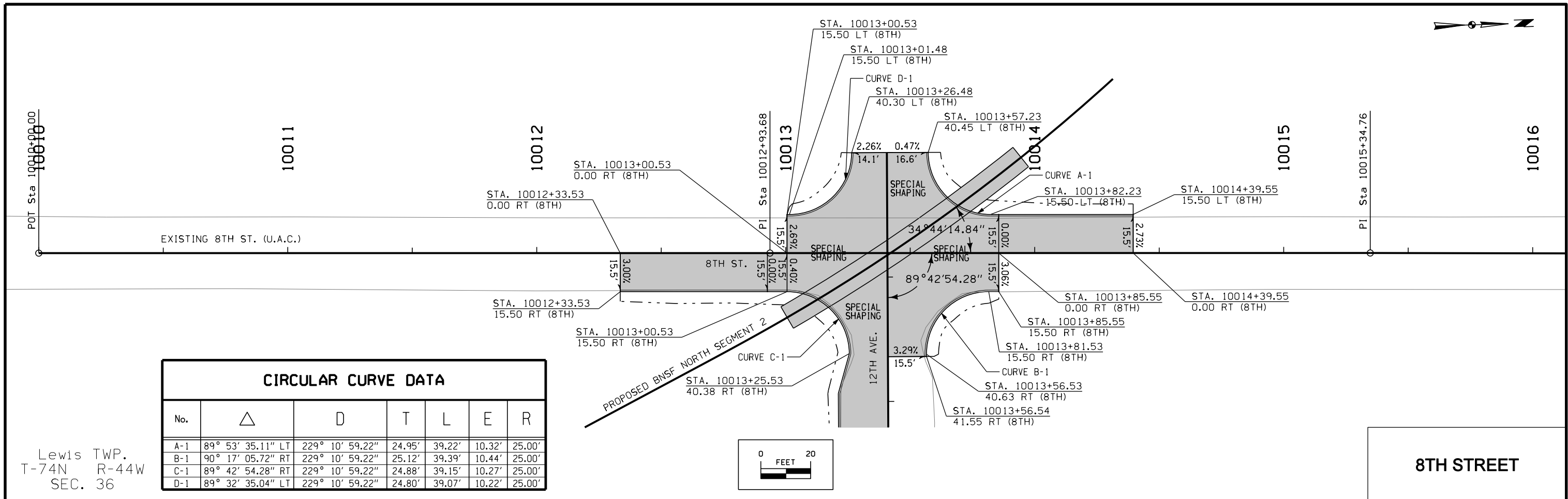
CBEC FUTURE MAIN TRACK
 STA 2100+00.00 CBEC FUTURE 2nd MAIN TRACK EXTENSION
 STAGE 13 CONSTRUCTION STA 2230+50.62
 BEGIN CONSTRUCTION STAGE 14 CONSTRUCTION
 END CONSTRUCTION

Note: Only Track Phasing is shown.



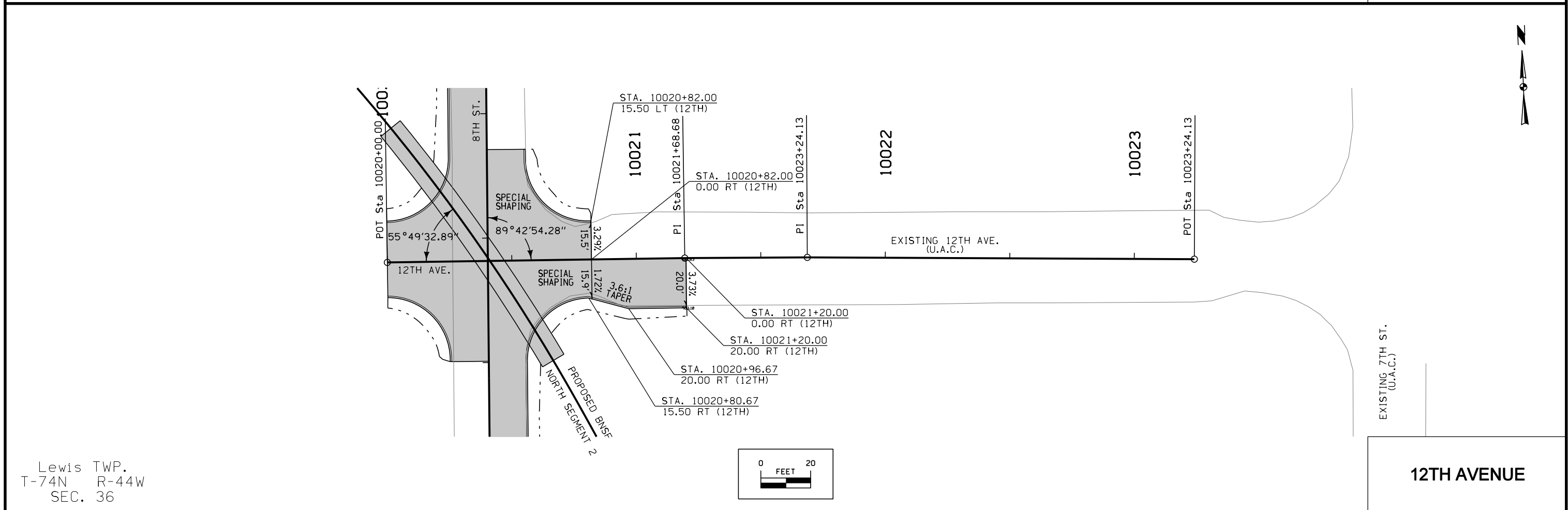
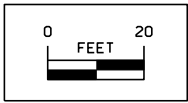
**STAGE 14
 CONSTRUCTION PHASING**

Intentionally Left Blank

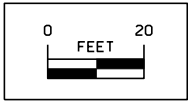


CIRCULAR CURVE DATA						
No.	△	D	T	L	E	R
A-1	89° 53' 35.11" LT	229° 10' 59.22"	24.95'	39.22'	10.32'	25.00'
B-1	90° 17' 05.72" RT	229° 10' 59.22"	25.12'	39.39'	10.44'	25.00'
C-1	89° 42' 54.28" RT	229° 10' 59.22"	24.88'	39.15'	10.27'	25.00'
D-1	89° 32' 35.04" LT	229° 10' 59.22"	24.80'	39.07'	10.22'	25.00'

Lewis TWP.
T-74N R-44W
SEC. 36



Lewis TWP.
T-74N R-44W
SEC. 36

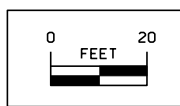
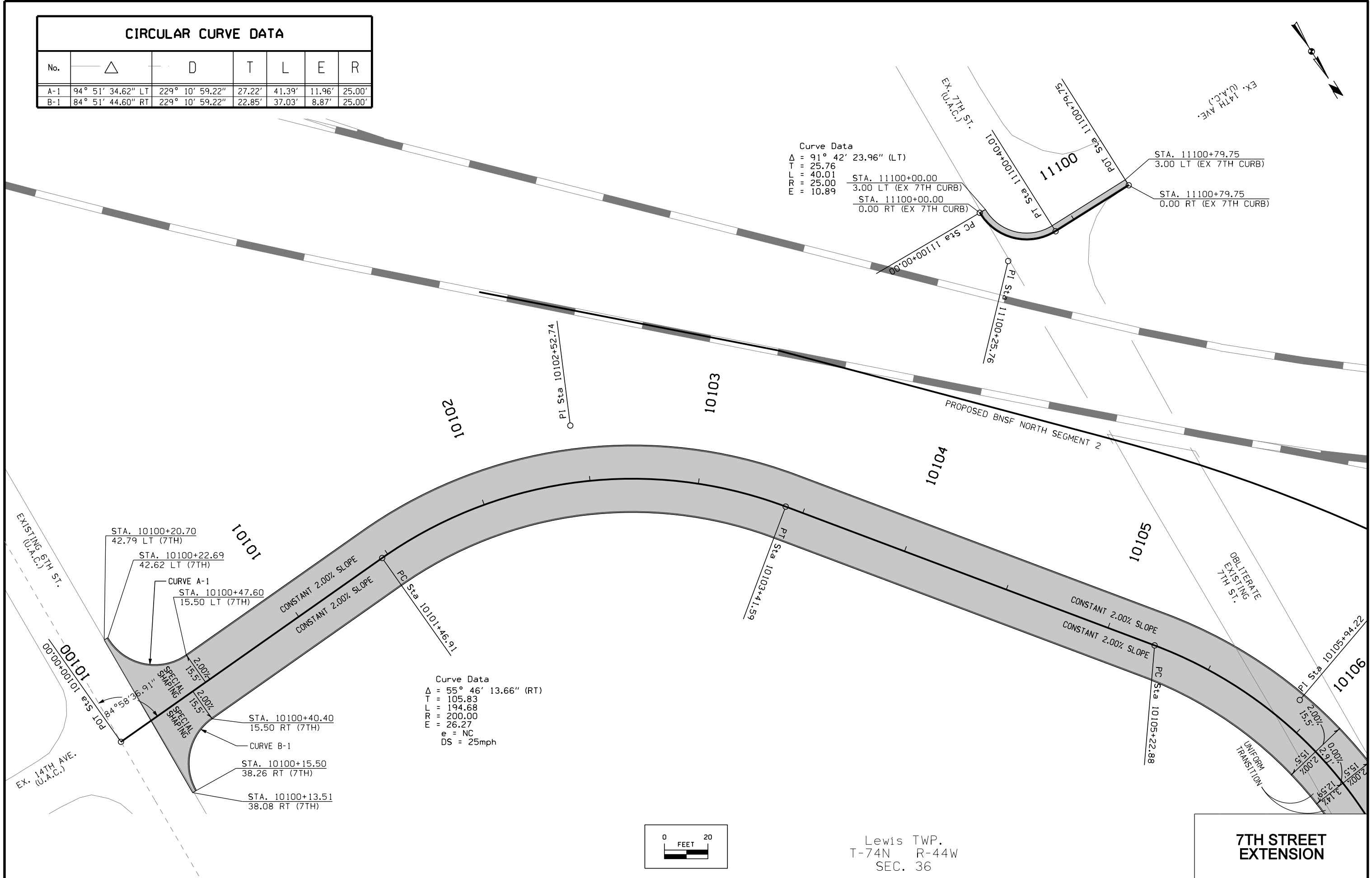


CIRCULAR CURVE DATA

No.	Δ	D	T	L	E	R
A-1	94° 51' 34.62" LT	229° 10' 59.22"	27.22'	41.39'	11.96'	25.00'
B-1	84° 51' 44.60" RT	229° 10' 59.22"	22.85'	37.03'	8.87'	25.00'

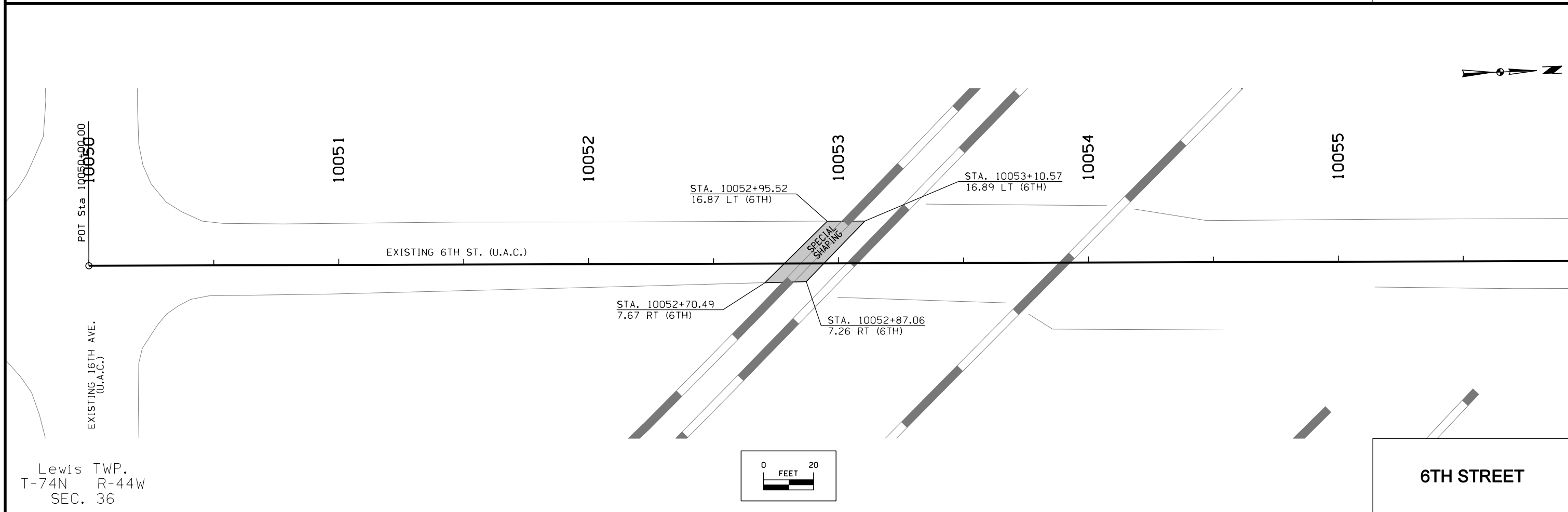
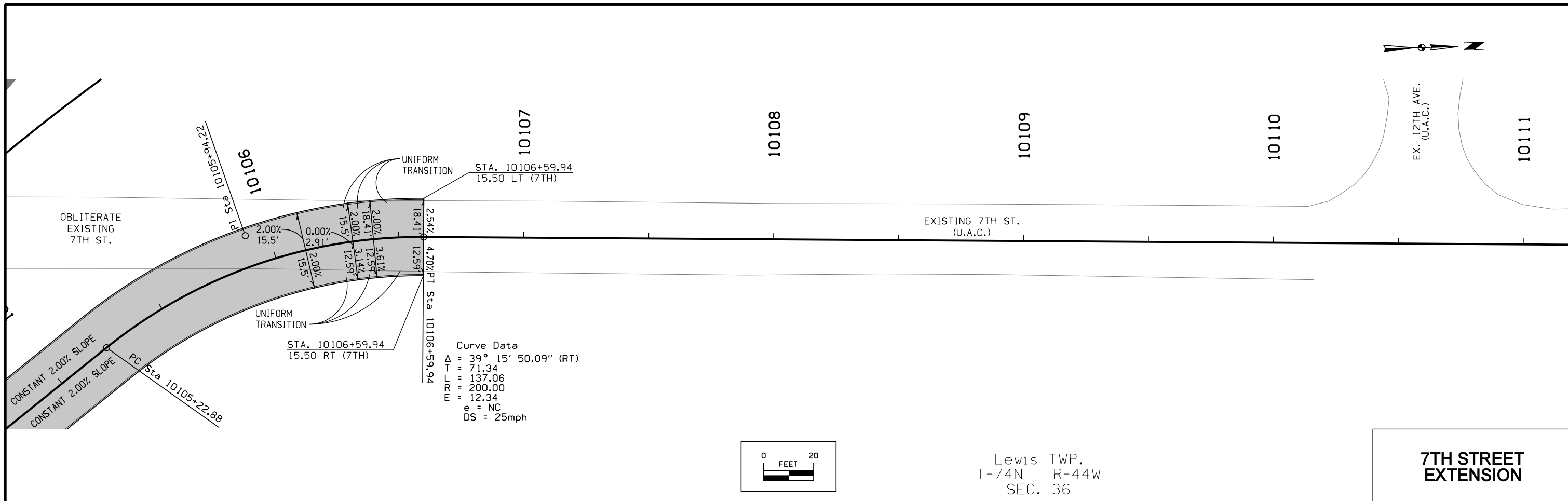
Curve Data
 Δ = 91° 42' 23.96" (LT)
 T = 25.76
 L = 40.01
 R = 25.00
 E = 10.89
 STA. 11100+00.00
 3.00 LT (EX 7TH CURB)
 STA. 11100+00.00
 0.00 RT (EX 7TH CURB)

Curve Data
 Δ = 55° 46' 13.66" (RT)
 T = 105.83
 L = 194.68
 R = 200.00
 E = 26.27
 e = NC
 DS = 25mph

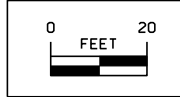
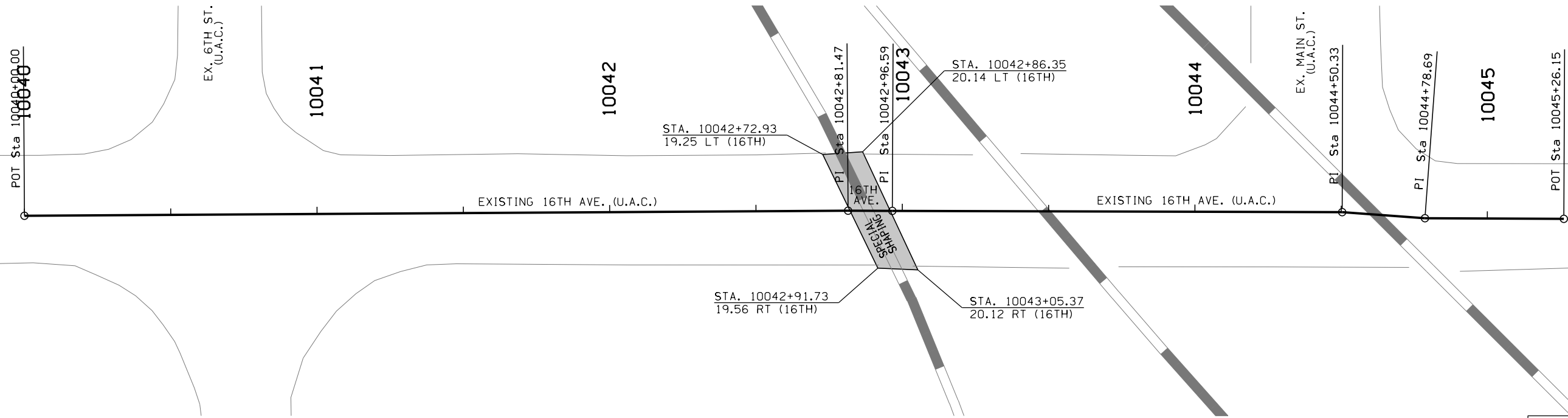


Lewis TWP.
 T-74N R-44W
 SEC. 36

7TH STREET EXTENSION

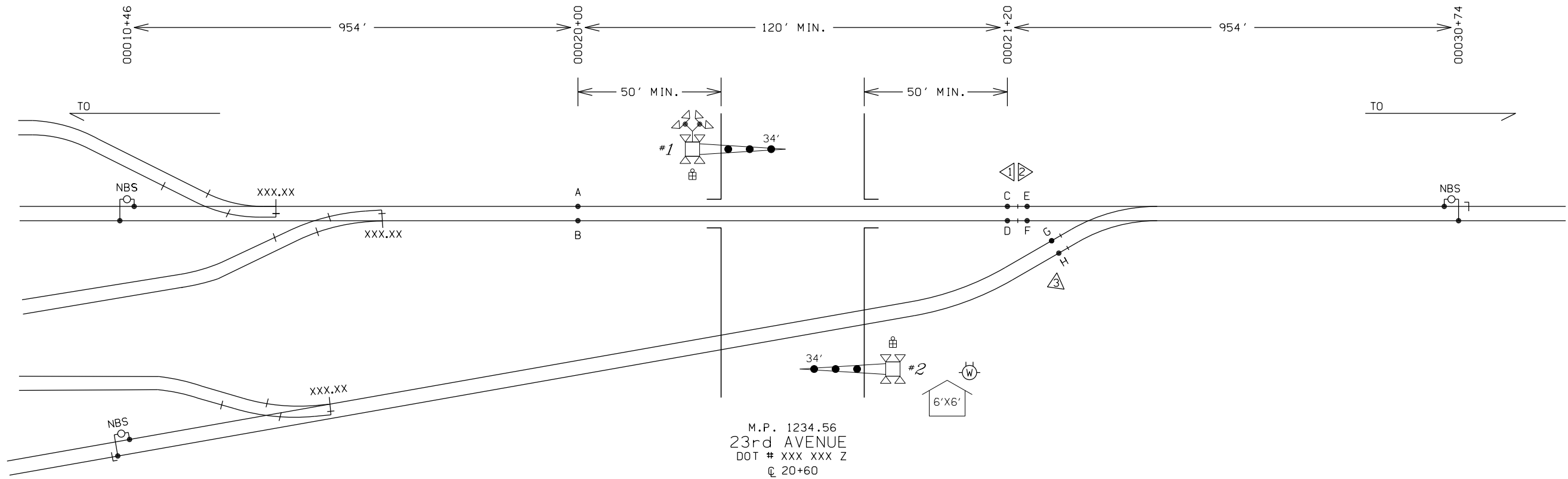


Lewis TWP.
T-74N R-44W
SEC. 36

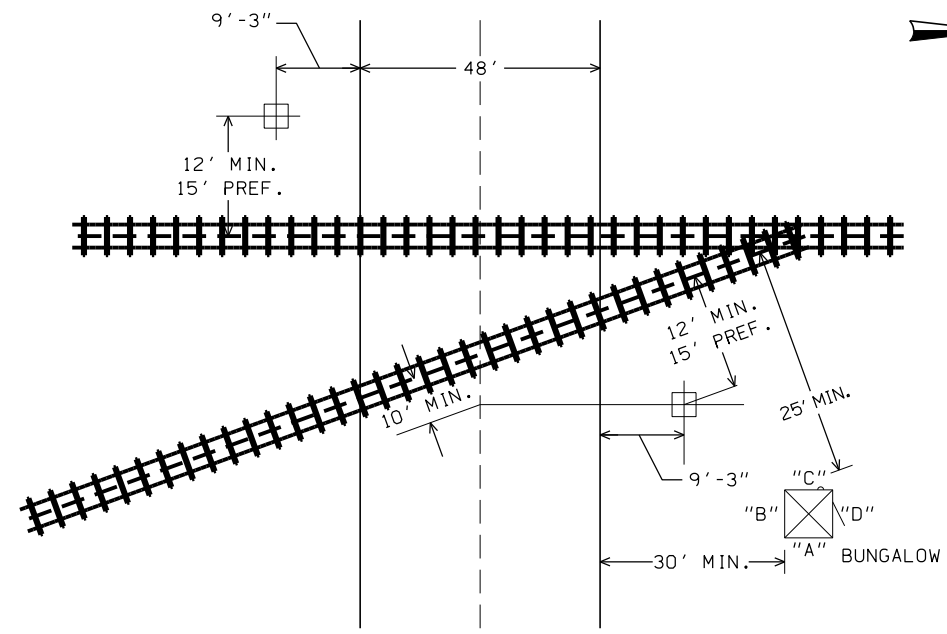


Lewis TWP.
T-74N R-44W
SEC. 1

16TH AVENUE



M.P. 1234.56
 23rd AVENUE
 DOT # XXX XXX Z
 CL 20+60



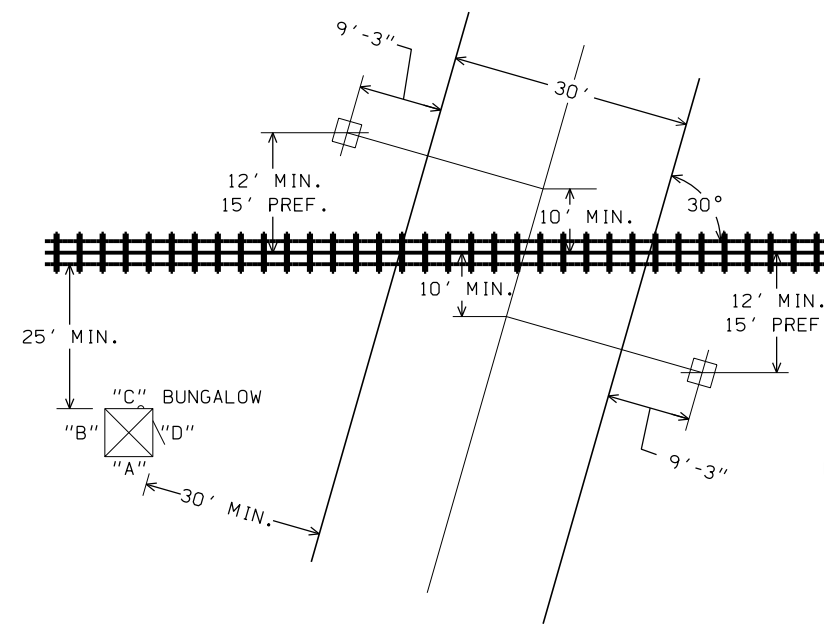
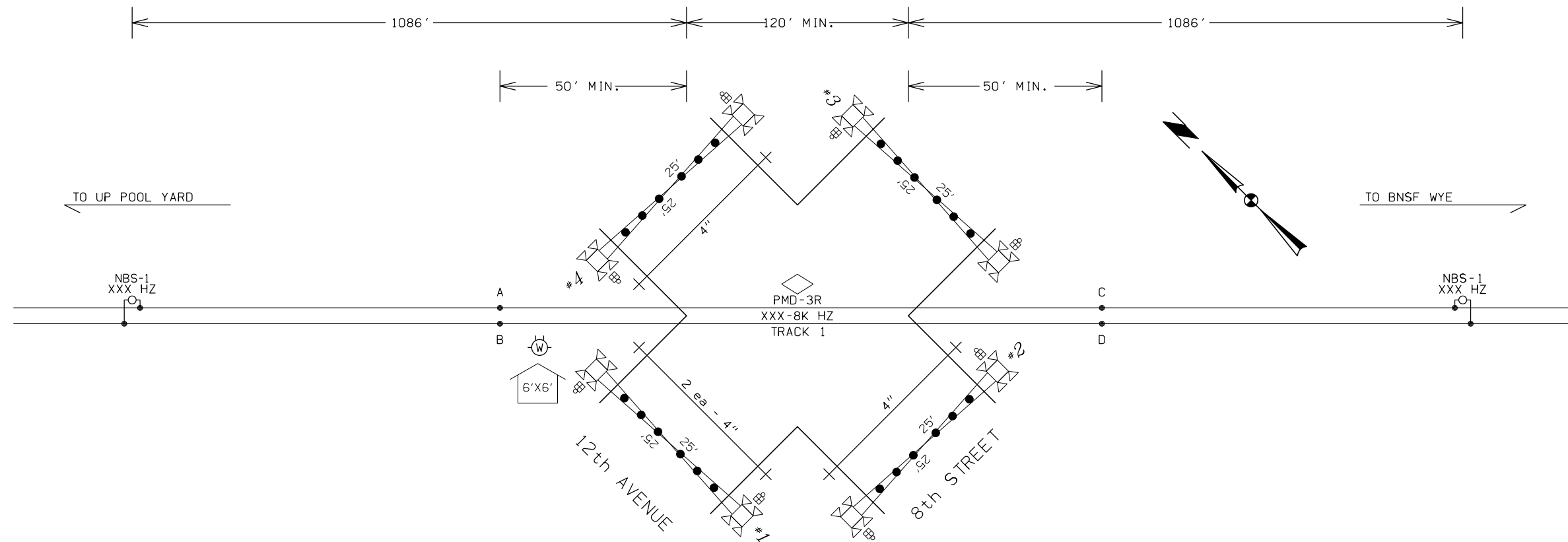
FOUNDATION PLACEMENT SKETCH
 NOT TO SCALE

- NOTES:
- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∠ - L LINE ARRESTER
 - ∠ - HEAVY DUTY ARRESTER
 - ⊕ - TWISTED WIRE
2' TURNS PER FOOT
 - - CONNECTION TO REC./RTU
- ALL WIRES #16 AWG UNLESS OTHERWISE NOTED

NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT 10 MPH.
 APPROACHES WERE LENGTHENED 0 SECOND(S) FOR WIDE OR ANGLED CROSSING (CT).
 APPROACHES WERE LENGTHENED 10 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 0 SECONDS FOR SIMULTANEOUS PREEMPTION.
 APPROACHES WERE LENGTHENED 30 SECONDS FOR ADVANCED PREEMPTION (APT).
 APPROACHES WERE LENGTHENED 5 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).
 ALL LAMPS TO BE 10V-25W OR LED.
 ALL FRONT LENS TO BE 30°-15° OR LED
 ALL BACK LENS TO BE 70° OR LED

**ROADWAY
 CROSSING SIGNAL
 23rd AVENUE**

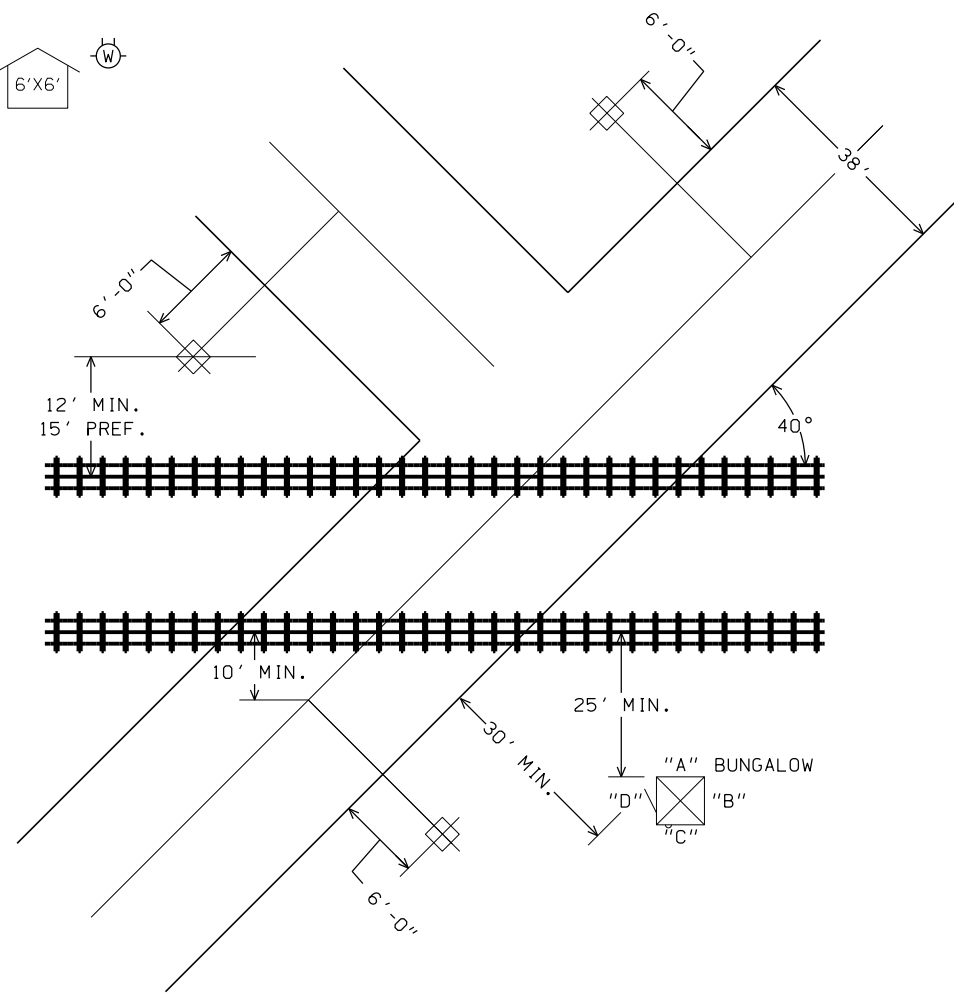
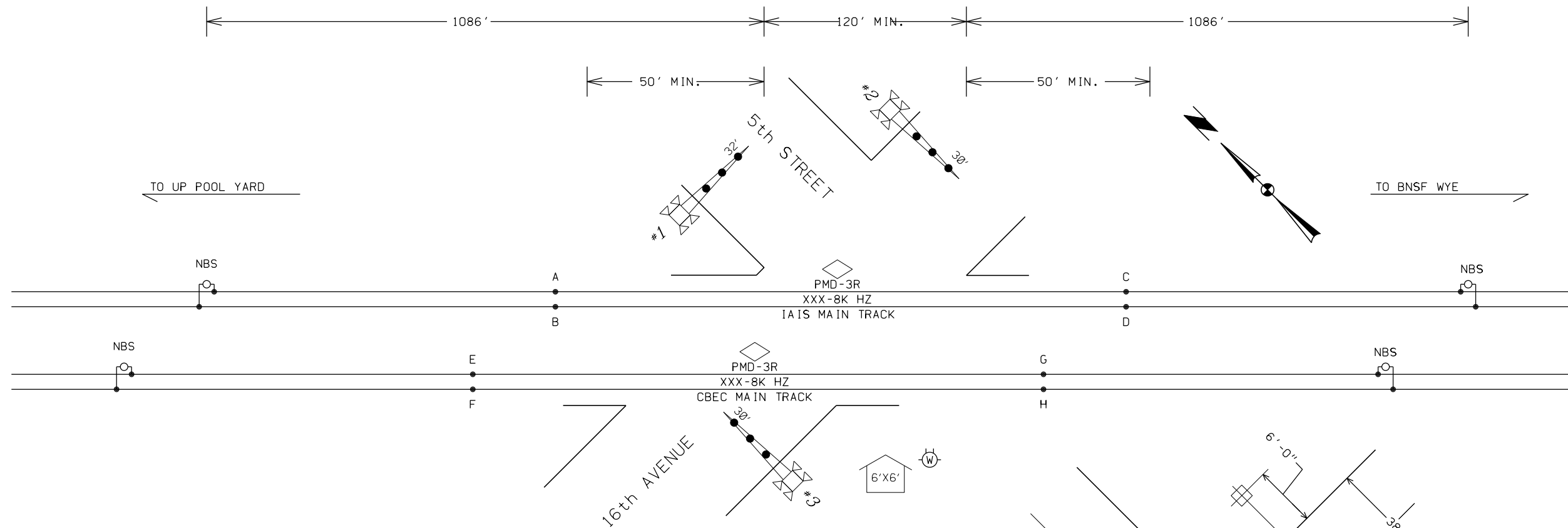


- NOTES:
- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∟ - LINE ARRESTER
 - ⌋ - HEAVY DUTY ARRESTER
 - ⊕ - TWISTED WIRE
2 TURNS PER FOOT
 - - CONNECTION TO REC./RTU
- ALL WIRES #16 AWG UNLESS OTHERWISE NOTED

NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT XX MPH.
 APPROACHES WERE LENGTHENED 3 SECOND(S) FOR WIDE OR ANGLED CROSSING (CT).
 APPROACHES WERE LENGTHENED 10 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 0 SECONDS FOR SIMULTANEOUS PREEMPTION.
 APPROACHES WERE LENGTHENED 0 SECONDS FOR ADVANCED PREEMPTION (APT).
 APPROACHES WERE LENGTHENED 4 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).
 ALL LAMPS TO BE 10V-25W OR LED.
 ALL FRONT LENS TO BE 30°-15° OR LED
 ALL BACK LENS TO BE 70° OR LED

**ROADWAY
CROSSING SIGNAL
8th ST & 12th AVE**



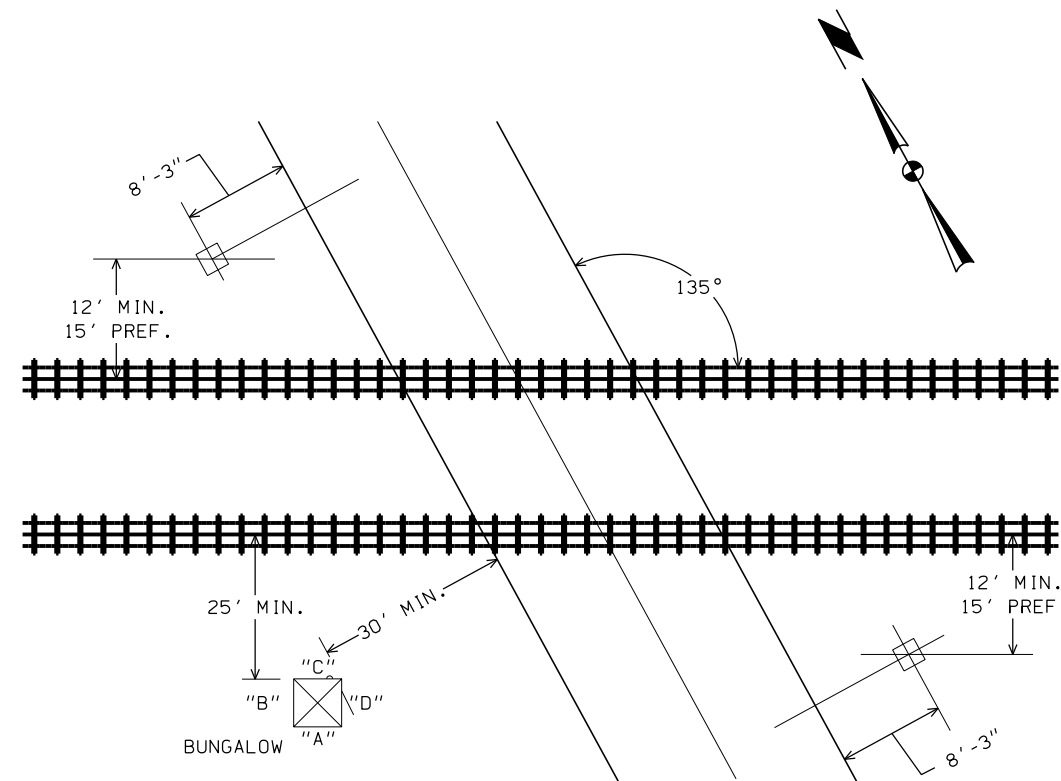
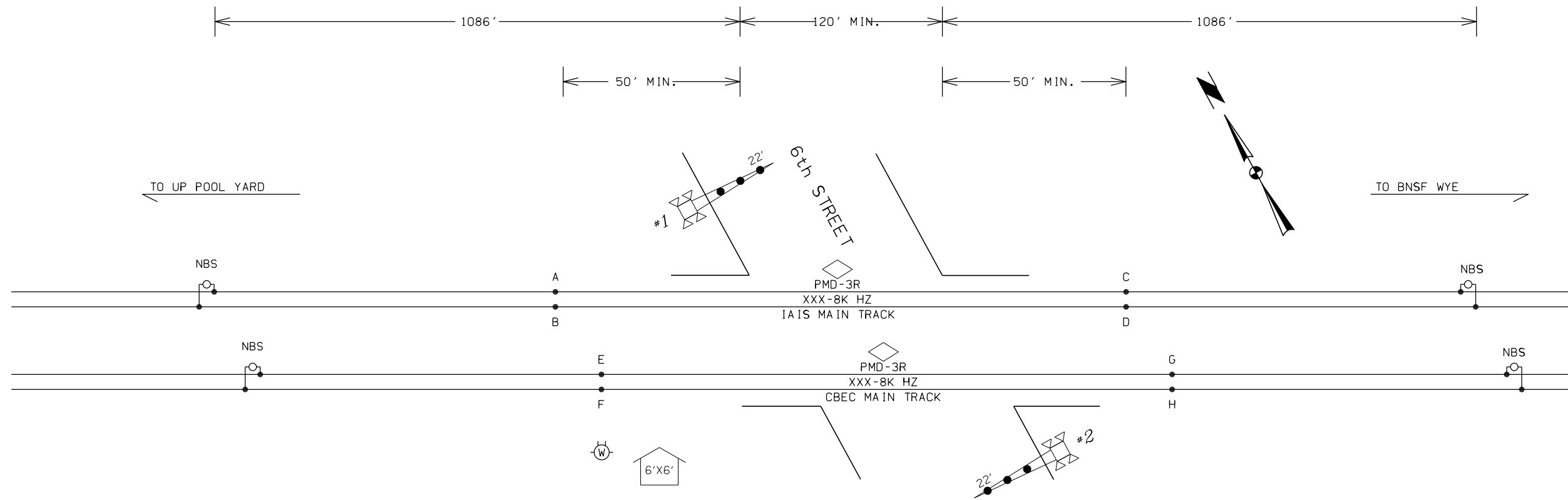
NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT XX MPH.
 APPROACHES WERE LENGTHENED 3 SECOND(S) FOR WIDE OR ANGLED CROSSING (CT).
 APPROACHES WERE LENGTHENED 10 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 0 SECONDS FOR SIMULTANEOUS PREEMPTION.
 APPROACHES WERE LENGTHENED 0 SECONDS FOR ADVANCED PREEMPTION (APT).
 APPROACHES WERE LENGTHENED 4 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).
 ALL LAMPS TO BE 10V-25W OR LED.
 ALL FRONT LENS TO BE 30°-15° OR LED
 ALL BACK LENS TO BE 70° OR LED

NOTES:

- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∠ - LINE ARRESTER
 - ⌋ - HEAVY DUTY ARRESTER
 - ⊕ - TWISTED WIRE
2 TURNS PER FOOT
 - - CONNECTION TO REC./RTU
- ALL WIRES #16 AWG UNLESS OTHERWISE NOTED

**ROADWAY
CROSSING SIGNAL
16th AVENUE**



NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT XX MPH.
 APPROACHES WERE LENGTHENED 3 SECOND(S) FOR WIDE OR ANGLED CROSSING (CT).
 APPROACHES WERE LENGTHENED 10 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 0 SECONDS FOR SIMULTANEOUS PREEMPTION.
 APPROACHES WERE LENGTHENED 0 SECONDS FOR ADVANCED PREEMPTION (APT).
 APPROACHES WERE LENGTHENED 4 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).
 ALL LAMPS TO BE 10V-25W OR LED.
 ALL FRONT LENS TO BE 30°-15° OR LED
 ALL BACK LENS TO BE 70° OR LED

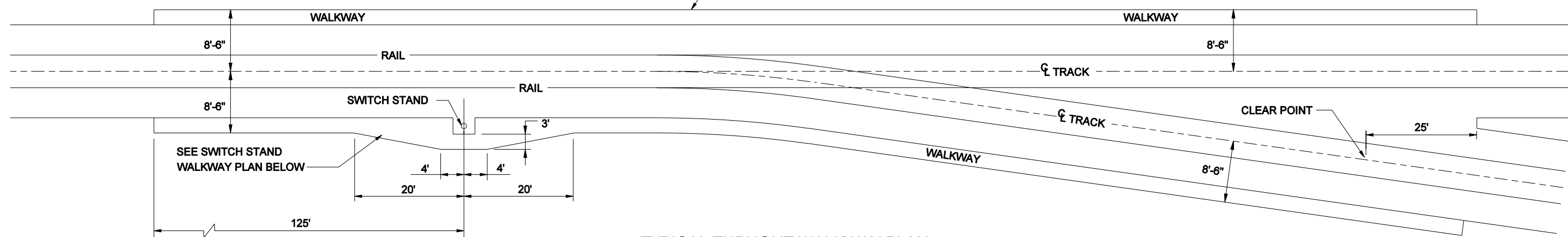
NOTES:

- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∠ - LINE ARRESTER
 - ⌞ - HEAVY DUTY ARRESTER
 - ⊕ - TWISTED WIRE
2 TURNS PER FOOT
 - - CONNECTION TO REC./RTU
- ALL WIRES #16 AWG UNLESS OTHERWISE NOTED

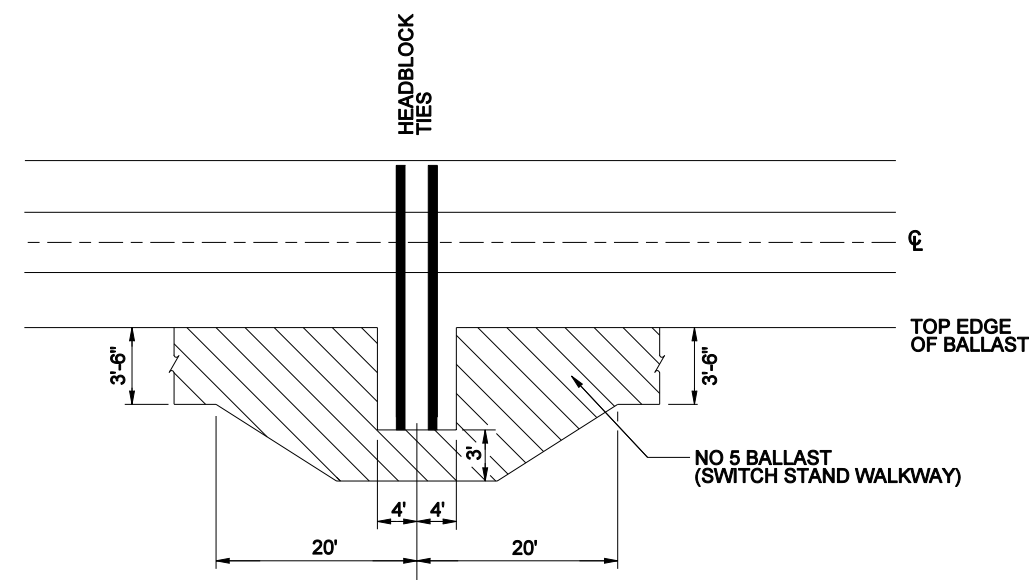
FOUNDATION PLACEMENT SKETCH
NOT TO SCALE

**ROADWAY
CROSSING SIGNAL
6th STREET**

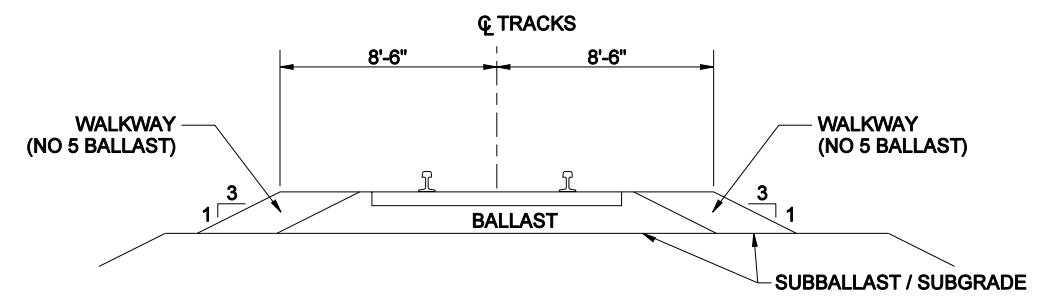
CONSTRUCT WALKWAY BALLAST ON OPPOSITE SIDE OF SWITCH STAND FOR CBEC, IAIS, WESTERN AND SIRE.



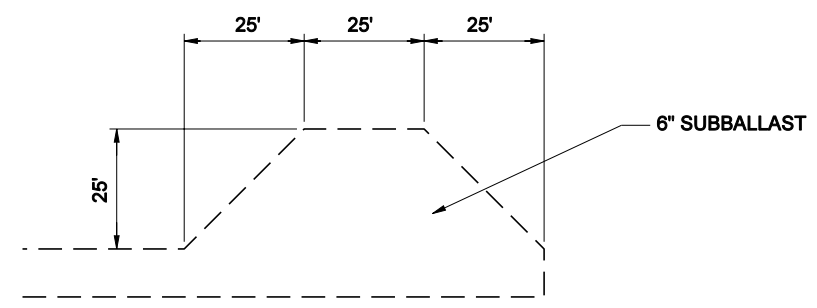
TYPICAL TURNOUT WALKWAY PLAN
NOT TO SCALE



SWITCH STAND WALKWAY PLAN
NOT TO SCALE

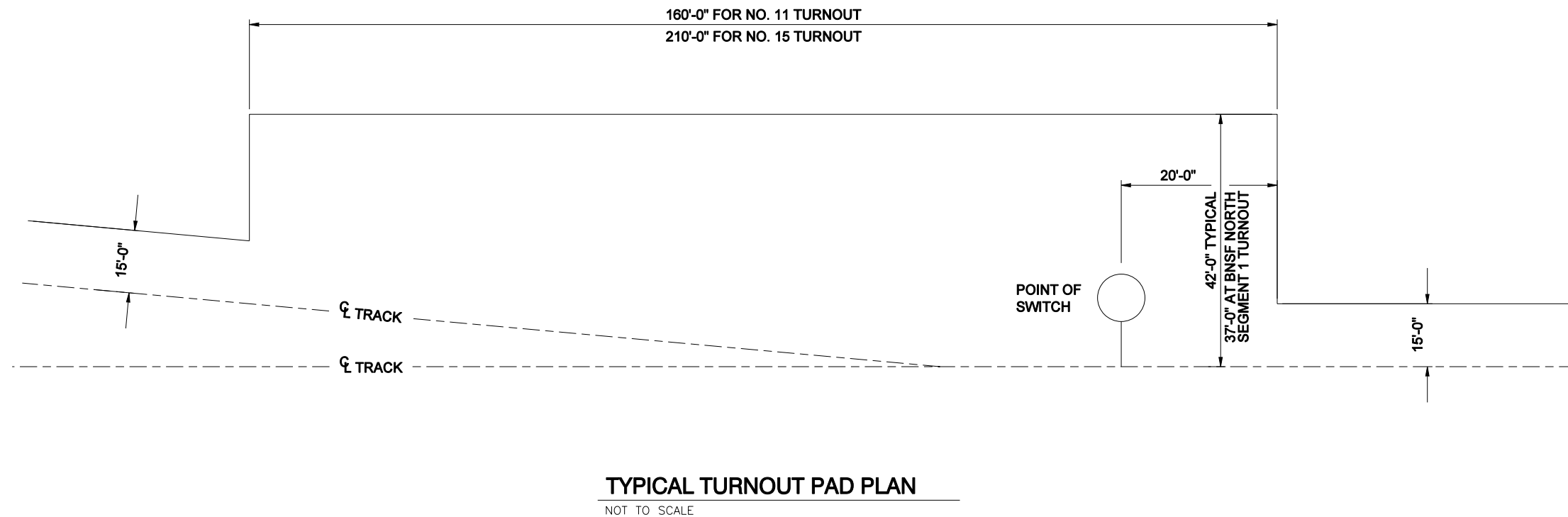
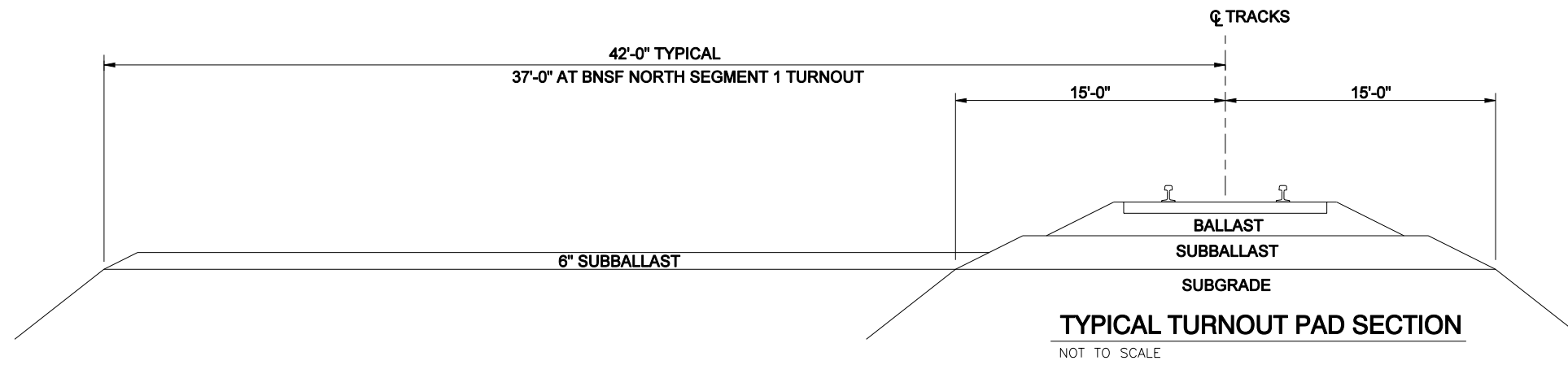


TYPICAL WALKWAY SECTION
NOT TO SCALE

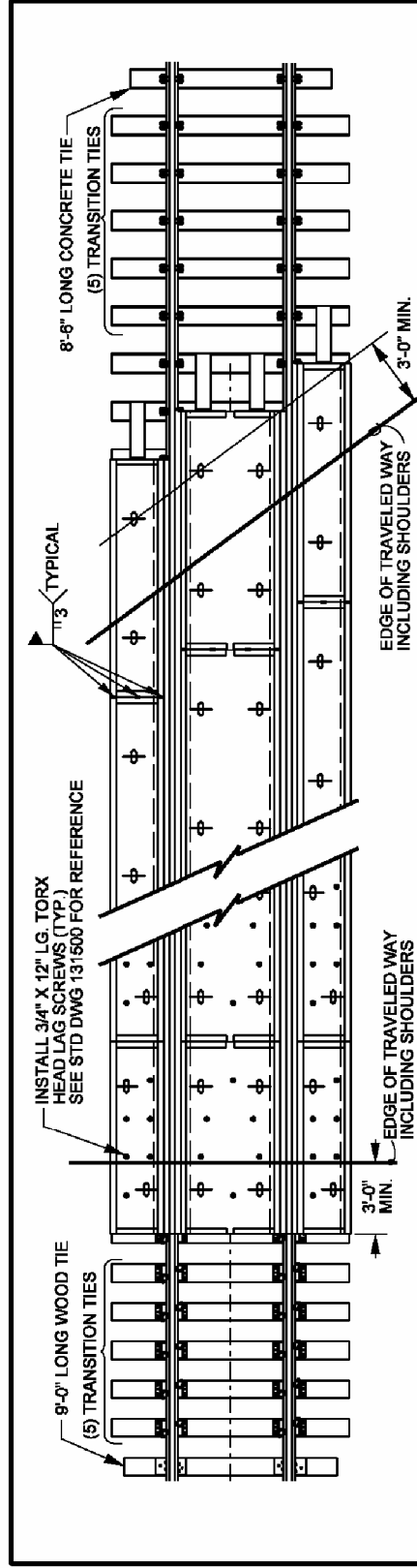


ACCESS ROAD CUL-DE-SAC
NOT TO SCALE

TYPICAL TURNOUT WALKWAY PLAN

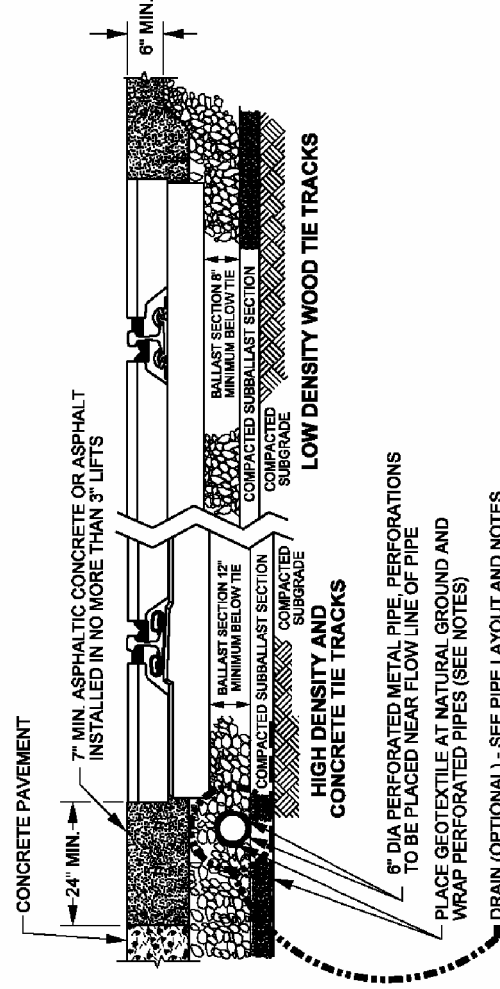


**TYPICAL
TURNOUT PAD**



PLAN VIEW OF PANEL WITH TIMBER TIES

PLAN VIEW OF PANEL & JOINT WELD LOCATION W/CONCRETE TIES



TYPICAL BALLAST AND ASPHALT DETAIL

NOTES:
SEE PAGE 2 FOR NOTES AND MORE DETAILS.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS
INSTALLATION OF ROAD
CROSSINGS W/ PRECAST
CONCRETE PANELS

STD DWG
0304G
PAGE 1 OF 2

ADOPTED: DEC. 19, 1987
REVISED: FEB. 20, 2007
FILE NO.: 0304G

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STD DWG
0304G
PAGE 1 OF 2

...10304G.dgn 2/22/2007 4:52:10 PM

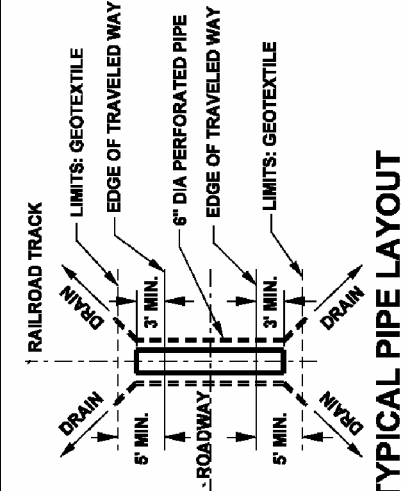
- NOTES:
- CROSSING PANEL SUPPORT THROUGH THE CROSSING MUST BE UNIFORM. CONCRETE TIE SPACING IS TO BE A MAXIMUM OF 24" CENTER TO CENTER. WOOD TIE SPACING TO BE MAXIMUM OF 19 1/2" CENTER TO CENTER. TIE SPACING MUST BE ADJUSTED TO SUPPORT THE ENDS OF THE PANELS.
 - CROSSING SITE IS TO BE INSPECTED PRIOR TO START OF INSTALLATION TO DETERMINE THAT PROPER DRAINAGE AND SURFACE SUPPORT IS PROVIDED. TRACK GRADE IS UNIFORM AND EXISTING TIES ARE AT LEAST 10' LONG.
 - IF CONDITIONS WARRANT, SITE IS TO BE OVER-EXCAVATED AND CROSSING DRAINAGE SYSTEM INSTALLED USING COMPACTED, WELL GRADED GRANULAR FILL; SUBBALLAST, GEOTEXTILE AND PERFORATED DRAINAGE PIPE (IF REQUIRED) INSTALLED PER DETAILS OF THIS DRAWING.
 - ADDITIONAL SITE DRAINAGE INCLUDING PROPER DRAINAGE AT EACH QUADRANT OF CROSSING SHALL BE COMPLETED TO ENSURE CROSSING DRAINAGE.
 - PRECAST PANELS ARE TO BE HANDLED AND SUPPORTED AT SPECIFIED LIFTING INSERT LOCATIONS ONLY. LIFTING EQUIPMENT AND CONNECTION INSERTS ARE TO BE PROPERLY SIZED TO HANDLE THE LENGTH OF PANELS BEING INSTALLED. RING LIFTING DEVICES ARE AVAILABLE FROM COMPANY WAREHOUSE.
 - APPROACH ASPHALT ROADWAY PAVING IS TO MEET STATE DOT HIGHWAY SPECIFICATIONS AND INSTALLED ACCORDINGLY. ASPHALT IS TO BE INSTALLED WITH PAVEMENT WITH MAXIMUM 3" LIFTS AND LAID PARALLEL TO CROSSING TO MINIMIZE APPROACH SETTLEMENTS.
 - GEOTEXTILE AND PIPE TO BE INSTALLED ONLY AT LOCATIONS WHERE REQUIRED BY STATE OR LOCAL AGENCIES OR WHERE DESIGNATED BY CHIEF ENGINEER.
 - GALVANIZED ELASTIC FASTENERS ARE TO BE USED WITHIN THE CROSSING AREA AND ON THE (5) TRANSITION TIES ON EACH SIDE OF THE CROSSING. PANDROL E-CLIPS TO BE USED ON WOOD TIE CROSSINGS AND SAFELOK CLIPS ON CONCRETE TIE CROSSINGS.
 - ALL RAIL JOINTS IN CROSSING AREA TO BE WELDED, DO NOT INSTALL BOLTED JOINT BARS.
 - REPORT CROSSING GATE MALFUNCTIONS TO 24 HR UPRR CROSSING HOT LINE AT 1-800-848-8715.
 - ALL EXCEPTIONS TO THIS PLAN MUST BE APPROVED BY THE CHIEF ENGINEER.

STD DWG
0304G
PAGE 2 OF 2



JOINT BETWEEN PANELS

INTERIOR JOINTS BETWEEN PANELS MUST REST ON CENTER LINE OF A WOOD OR CONCRETE TIE AS SHOWN



TYPICAL PIPE LAYOUT

NOTE:
GEOTEXTILE & PIPE TO BE INSTALLED ONLY AT LOCATIONS WHERE REQUIRED BY STATE OR LOCAL AGENCIES OR WHERE DESIGNATED BY CHIEF ENGINEER.

REQUIRED COMPONENTS	410-1371
RING LIFTING DEVICE	410-1371
3/4" TORX SCREW FOR WOOD TIES (STD DWG 131500)	130-5400
ELASTOMERIC BEARING PAD FOR 14 1/2" RAIL ON WOOD TIES	540-0203
CONFORMAL ELASTOMERIC BEARING PAD FOR 10'-0" CONCRETE TIES	503-6315
CONFORMAL ELASTOMERIC BEARING PAD FOR 8'-6" CONCRETE TIES	503-6312
END RESTRAINT FOR CONCRETE TIES (ONLY)	540-1925

OPTIONAL COMPONENTS (SET INCLUDES 8 PIECES)	510-3201
20' SECTION 6" PERFORATED PIPE	510-3201
6" ADJUSTABLE ELBOW	510-3557
6" PIPE BANDS	510-3379
100' ROLL GEOTEXTILE	560-0119

END RESTRAINT DETAIL (FOR CONCRETE TIES ONLY)

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS
INSTALLATION OF ROAD
CROSSINGS W/ PRECAST
CONCRETE PANELS

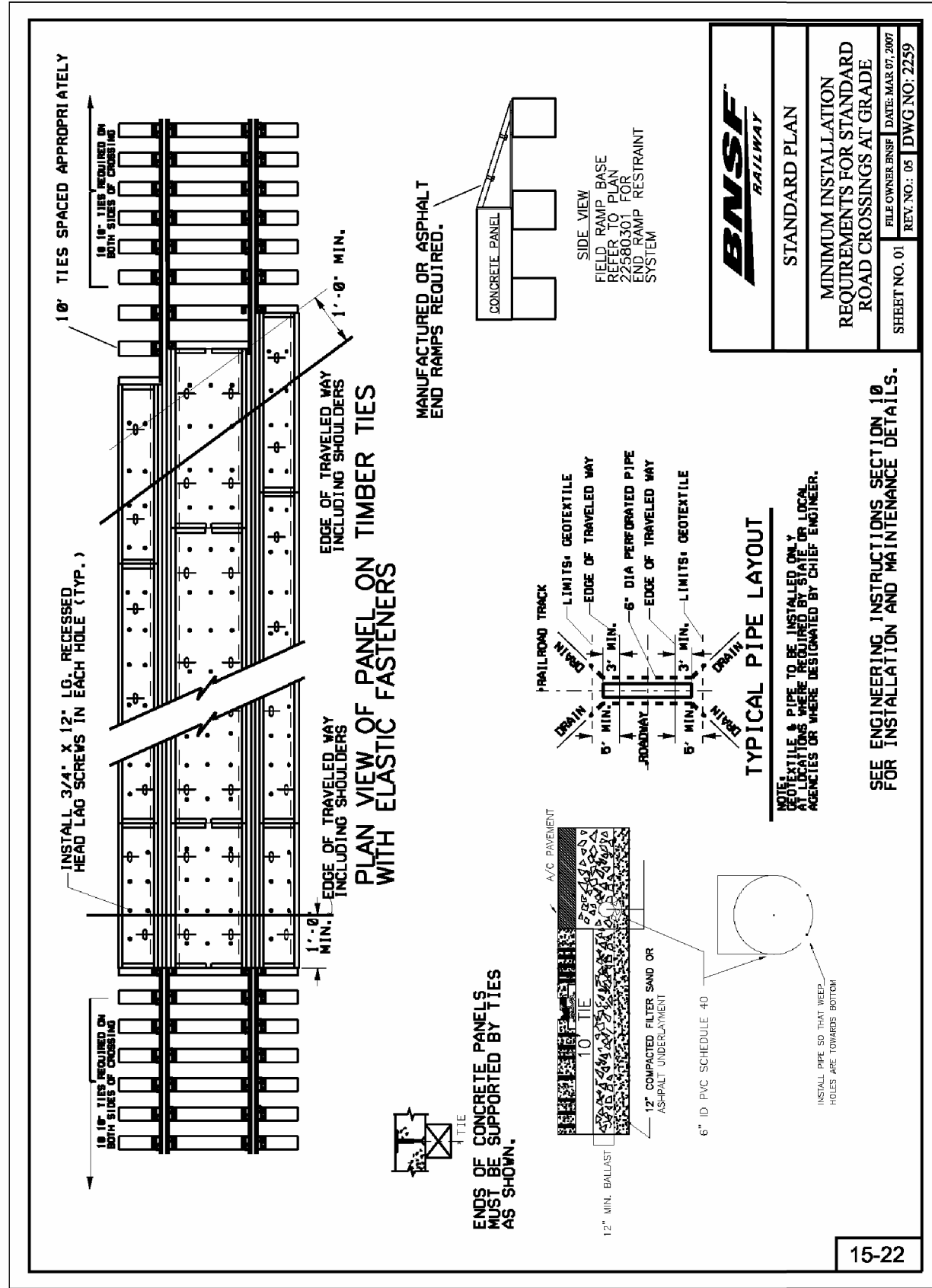
ADOPTED: DEC. 19, 1987
REVISED: OCT. 3, 2005
FILE NO.: 0304G

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STD DWG
0304G
PAGE 2 OF 2

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ROAD CROSSING
INSTALLATION
DETAILS



BNSF RAILWAY

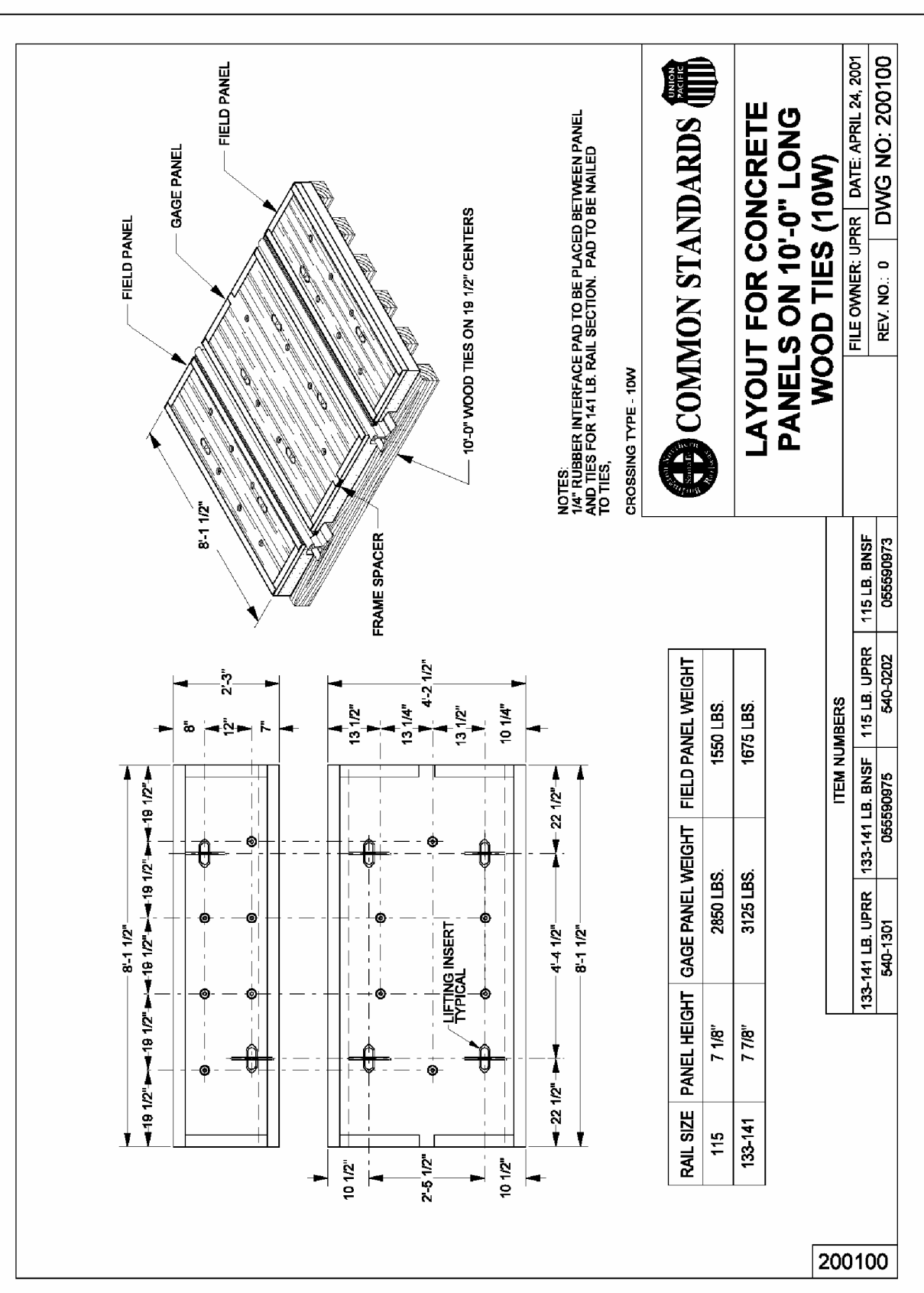
STANDARD PLAN

MINIMUM INSTALLATION REQUIREMENTS FOR STANDARD ROAD CROSSINGS AT GRADE

FILE OWNER: BNSF DATE: MAR 07, 2007
 SHEET NO. 01 REV. NO.: 05 DWG NO: 2259

SEE ENGINEERING INSTRUCTIONS SECTION 10 FOR INSTALLATION AND MAINTENANCE DETAILS.

15-22

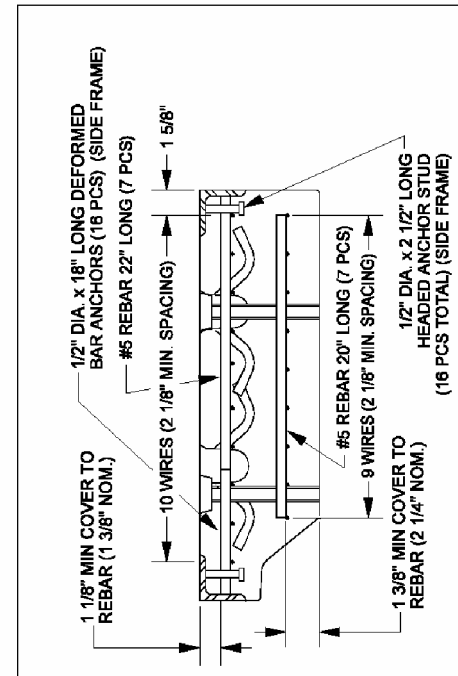


RAIL SIZE	PANEL HEIGHT	GAGE PANEL WEIGHT	FIELD PANEL WEIGHT	FIELD PANEL WEIGHT
115	7 1/8"	2850 LBS.	1550 LBS.	1550 LBS.
133-141	7 7/8"	3125 LBS.	1675 LBS.	1675 LBS.

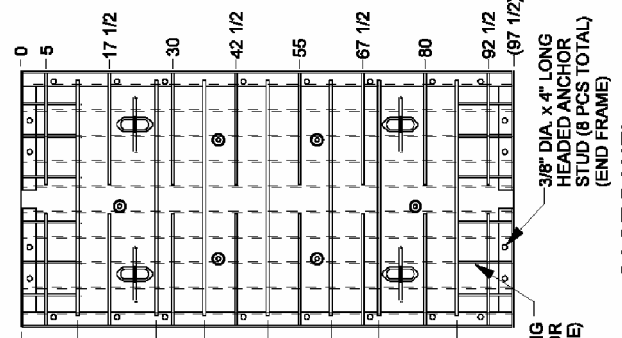
ITEM NUMBERS			
133-141 LB. UPRR	133-141 LB. BNSF	115 LB. UPRR	115 LB. BNSF
540-1301	055590975	540-0202	055590973

ROAD CROSSING INSTALLATION DETAILS

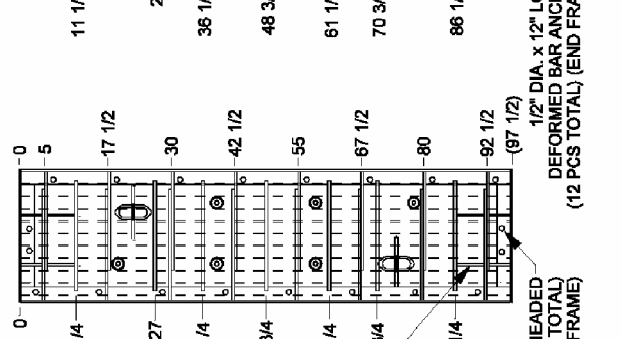
200100



CROSS SECTION - FIELD PANEL



GAGE PANEL



FIELD PANEL

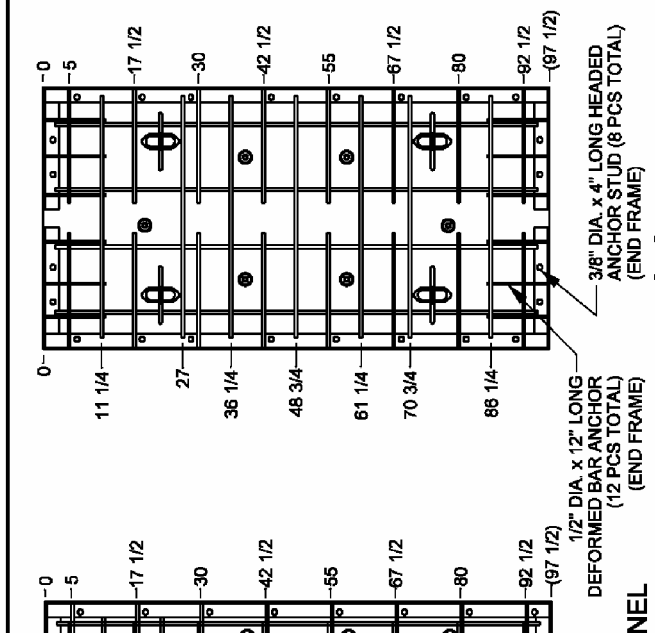
NOTES:
 28 DAY CONCRETE COMPRESSIVE STRENGTH = 7000psi
 MIN. TRANSFER COMPRESSIVE STRENGTH = 4500psi
 PRESTRESSING WIRE SHALL BE 5.25mm DIA. CONFORMING WITH
 ASTM A-881 STEEL WIRE DEFORMED, STRESS RELIEVED OR LOW
 RELAXATION FOR PRESTRESSED CONCRETE TIES WITH A MINIMUM
 BREAKING STRENGTH OF 8800 Lbf.
 WIRE SHALL BE TENSIONED IN ACCORDANCE WITH PCI
 REQUIREMENTS TO 8960Lbf PER WIRE.
 CROSSING TYPE - 10W



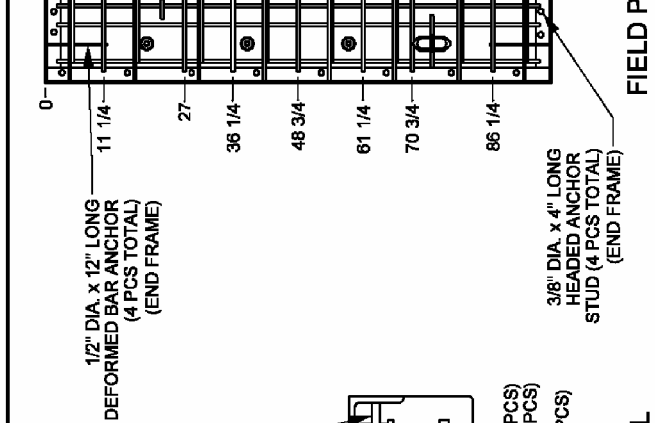
**PRESTRESSED CONCRETE
 PANELS FOR 10'-0" LONG
 WOOD TIES (10W)**

FILE OWNER: UPRR DATE: APRIL 24, 2001
 REV. NO.: 0 DWG NO: 200101

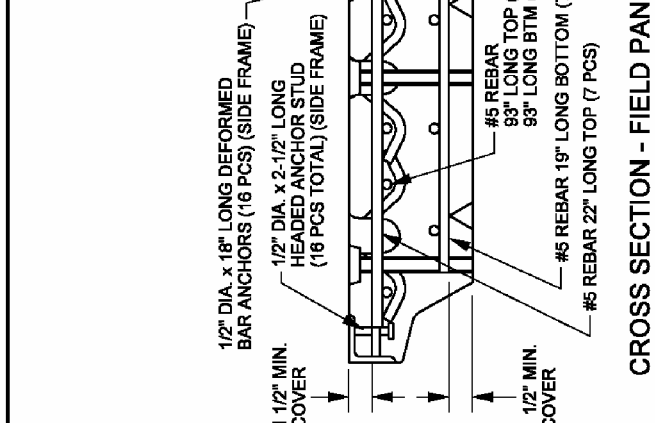
200101



FIELD PANEL



GAGE PANEL



CROSS SECTION - FIELD PANEL

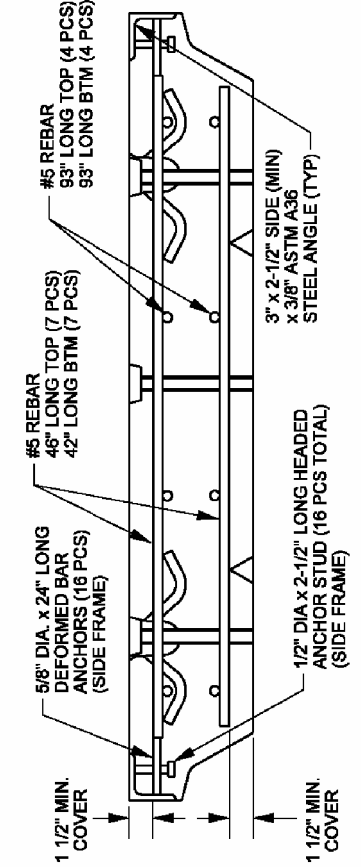
NOTES:
 CONCRETE COMPRESSIVE STRENGTH SHALL BE
 AS FOLLOWS:
 @ 28 DAYS = 6000 psi MINIMUM
 @ SHIPMENT = 4000 psi MINIMUM
 @ REMOVAL FROM FORMS = 2500 psi MINIMUM.
 CROSSING TYPE - 10W



**PRECAST CONCRETE
 PANELS FOR 10'-0" LONG
 WOOD TIES (10W)**

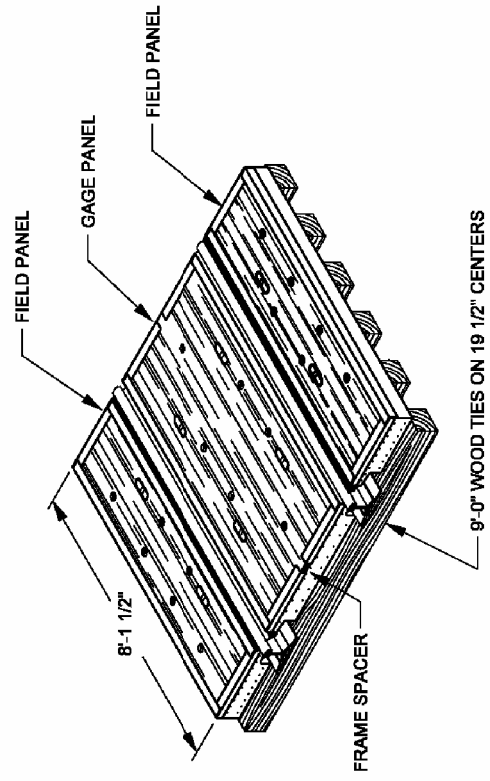
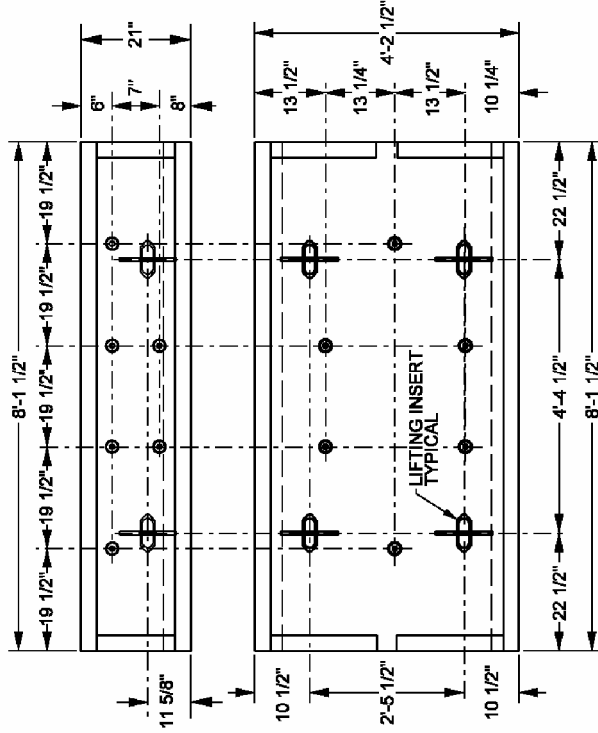
FILE OWNER: UPRR DATE: APRIL 24, 2001
 REV. NO.: 0 DWG NO: 200102

200102



CROSS SECTION - GAGE PANEL

**ROAD CROSSING
 PANEL DETAILS**



NOTES:
 1. THIS CROSSING IS TO BE INSTALLED ON ROADWAYS WITH HIGHWAY TRAFFIC VOLUMES LESS THAN 500 VEHICLES AND LIMITED TRUCK TRAFFIC.
 2. 1/4" RUBBER INTERFACE PAD TO BE PLACED BETWEEN PANEL AND TIES FOR 141 LB. RAIL SECTION. PAD TO BE NAILED TO TIES.
 3. CROSSING TYPE - 9W

RAIL SIZE	PANEL HEIGHT	GAGE PANEL WEIGHT	FIELD PANEL WEIGHT
115	7 1/8"	2850 LBS.	1125 LBS.
133-141	7 7/8"	3125 LBS.	1275 LBS.

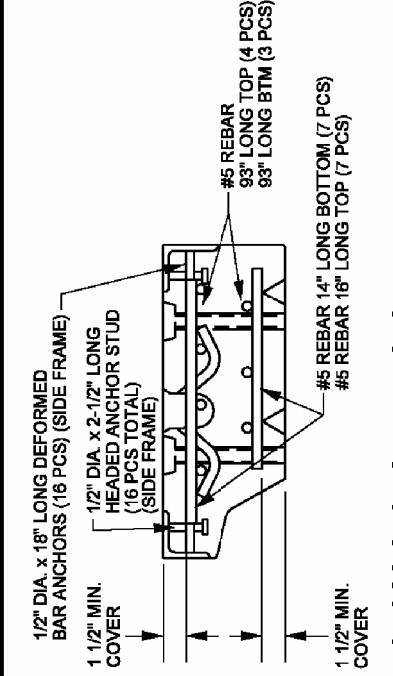
COMMON STANDARDS

LAYOUT FOR CONCRETE PANELS ON 9'-0" LONG WOOD TIES (9W)

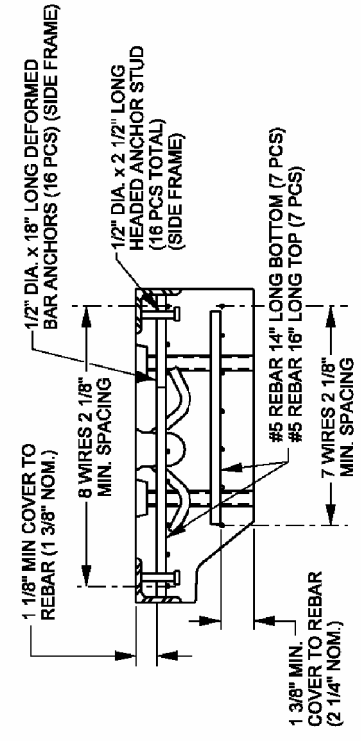
FILE OWNER: UPRR DATE: MARCH 26, 2003
 REV. NO.: 1 DWG NO: 200200

ITEM NUMBERS			
133-141 LB. UPRR	133-141 LB. BNSF	115 LB. UPRR	115 LB. BNSF
540-1300	NON-STOCK	540-0201	NON-STOCK

200200



CROSS SECTION - PRECAST FIELD PANEL



CROSS SECTION - PRESTRESSED FIELD PANEL

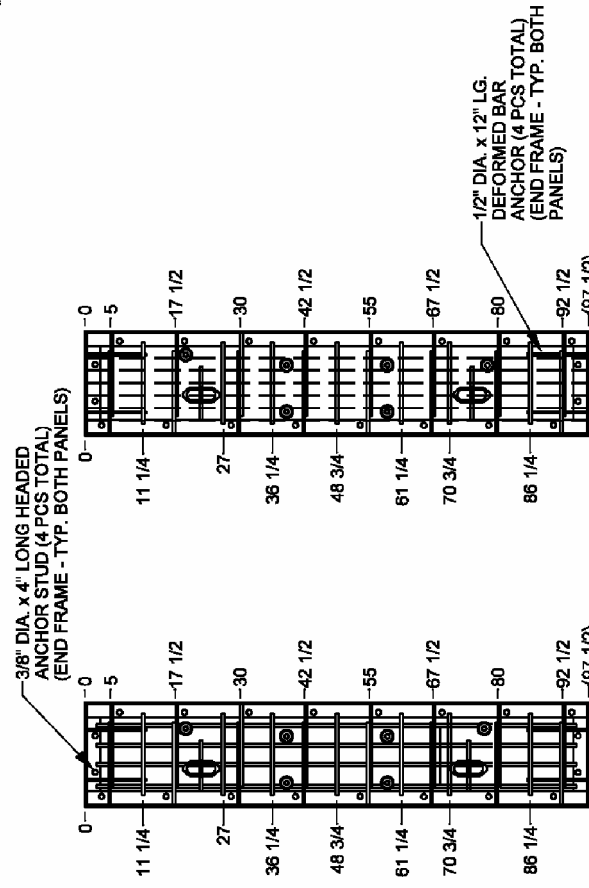
*FOR GAGE PANELS, SEE DWGS 500110 & 500120.

PRECAST NOTES:
 1. CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
 @ 28 DAYS = 6000 psi MINIMUM
 @ SHIPMENT = 4000 psi MINIMUM
 @ REMOVAL FROM FORMS = 2500 psi MINIMUM.

PRESTRESSED NOTES:
 1. 28 DAY CONCRETE COMPRESSIVE STRENGTH = 7000psi
 MIN. TRANSFER COMPRESSIVE STRENGTH = 4600psi

2. PRESTRESSING WIRE SHALL BE 5.25mm DIA. CONFORMING WITH ASTM A-881 STEEL WIRE DEFORMED, STRESS RELIEVED OR LOW RELAXATION FOR PRESTRESSED CONCRETE TIES* WITH A MINIMUM BREAKING STRENGTH OF 8800 LBF.

3. WIRE SHALL BE TENSIONED IN ACCORDANCE WITH PCI REQUIREMENTS TO 6860LBF PER WIRE.



PRECAST FIELD PANEL

PRESTRESSED FIELD PANEL

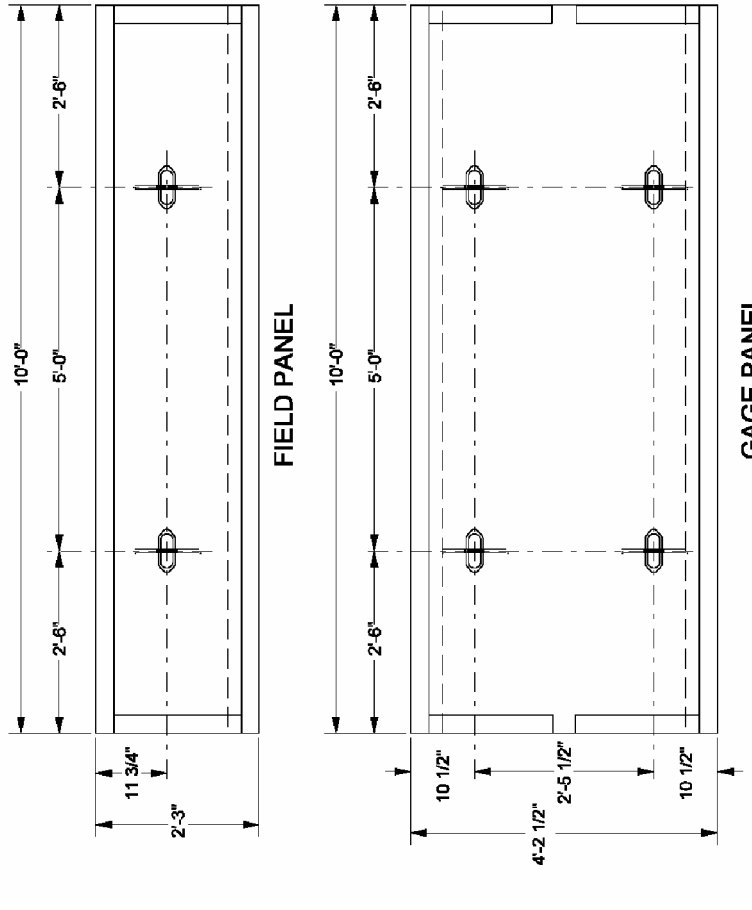
200201

COMMON STANDARDS

PRESTRESSED AND PRECAST CONCRETE PANELS FOR 9'-0" LONG WOOD TIES (9W)

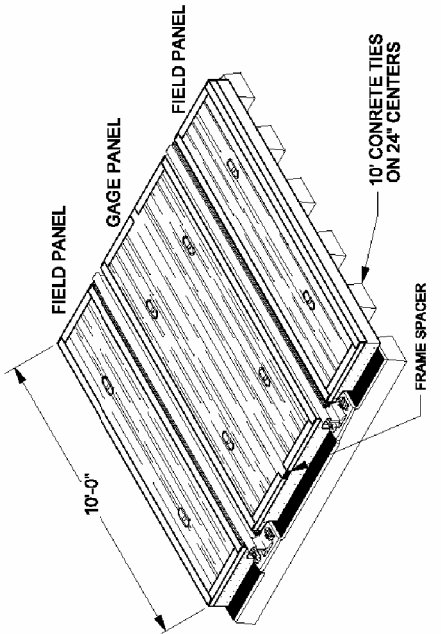
FILE OWNER: UPRR DATE: MARCH 26, 2003
 REV. NO.: 1 DWG NO: 200201

ROAD CROSSING
 PANEL DETAILS



RAIL SIZE	PANEL HEIGHT	GAGE PANEL WEIGHT	FIELD PANEL WEIGHT
133-141	8"	4250 LBS.	2150 LBS.

NOTES:
 1/4" CONFORMAL RUBBER INTERFACE PAD TO BE PLACED BETWEEN PANEL AND TIES.
 CROSSING TYPE - 10C



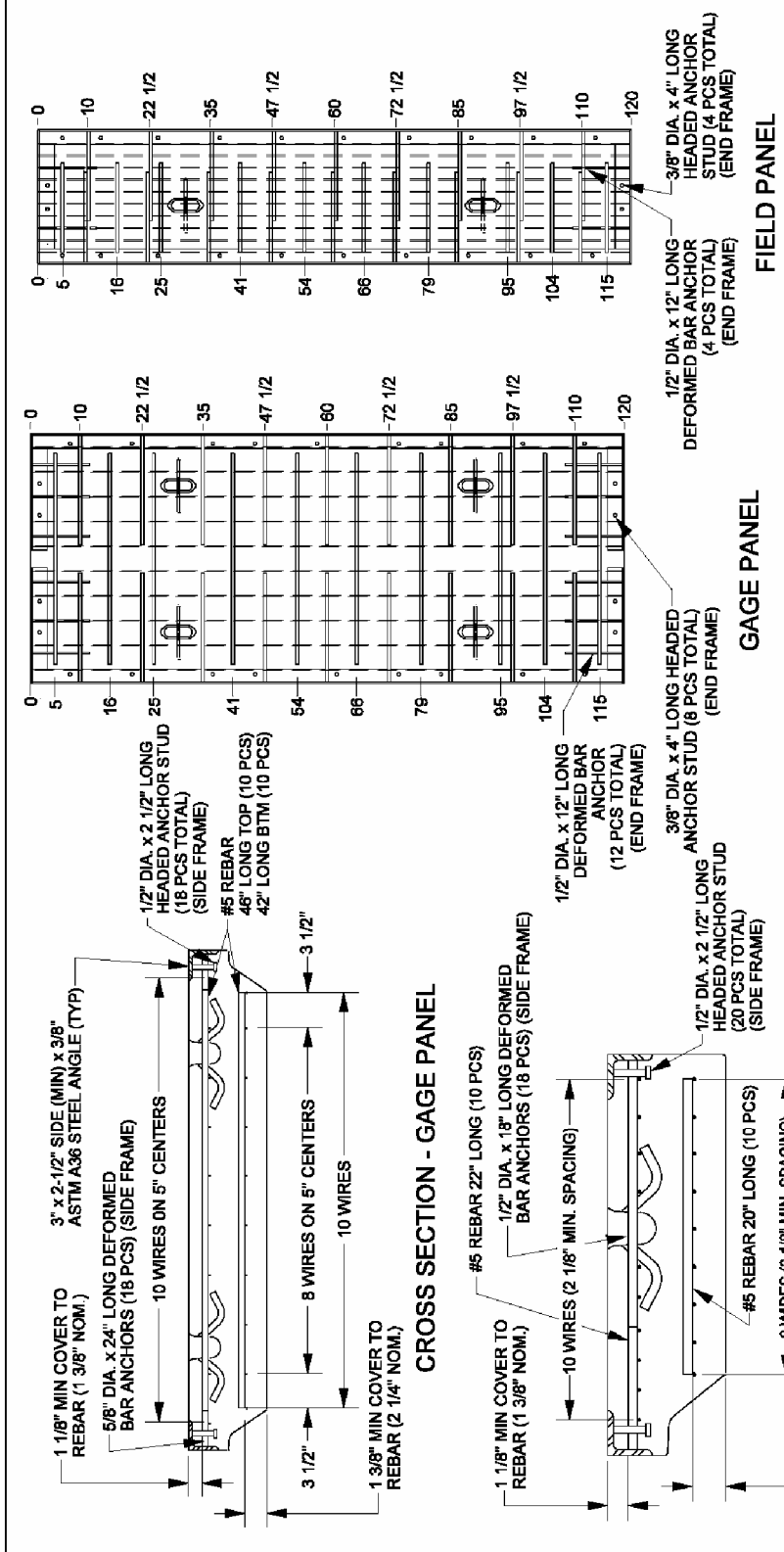
COMMON STANDARDS

LAYOUT FOR CONCRETE PANELS ON 10'-0" LONG CONCRETE TIES (10C)

FILE OWNER: UPRR DATE: APRIL 24, 2001
 REV. NO.: 0 DWG NO: 200300

ITEM NUMBERS	
133-141 LB. UPRR	133-141 LB. BNSF
540-1315	NON-STOCK

200300



NOTES:
 28 DAY CONCRETE COMPRESSIVE STRENGTH = 7000psi
 MIN. TRANSFER COMPRESSIVE STRENGTH = 4500psi

PRESTRESSING WIRE SHALL BE 5.25mm DIA. CONFORMING WITH ASTM A-881 "STEEL WIRE DEFORMED, STRESS RELIEVED OR LOW RELAXATION FOR PRESTRESSED CONCRETE TIES" WITH A MINIMUM BREAKING STRENGTH OF 8800 Lb.

WIRE SHALL BE TENSIONED IN ACCORDANCE WITH PCI REQUIREMENTS TO 6860LB PER WIRE.

CROSSING TYPE - 10C

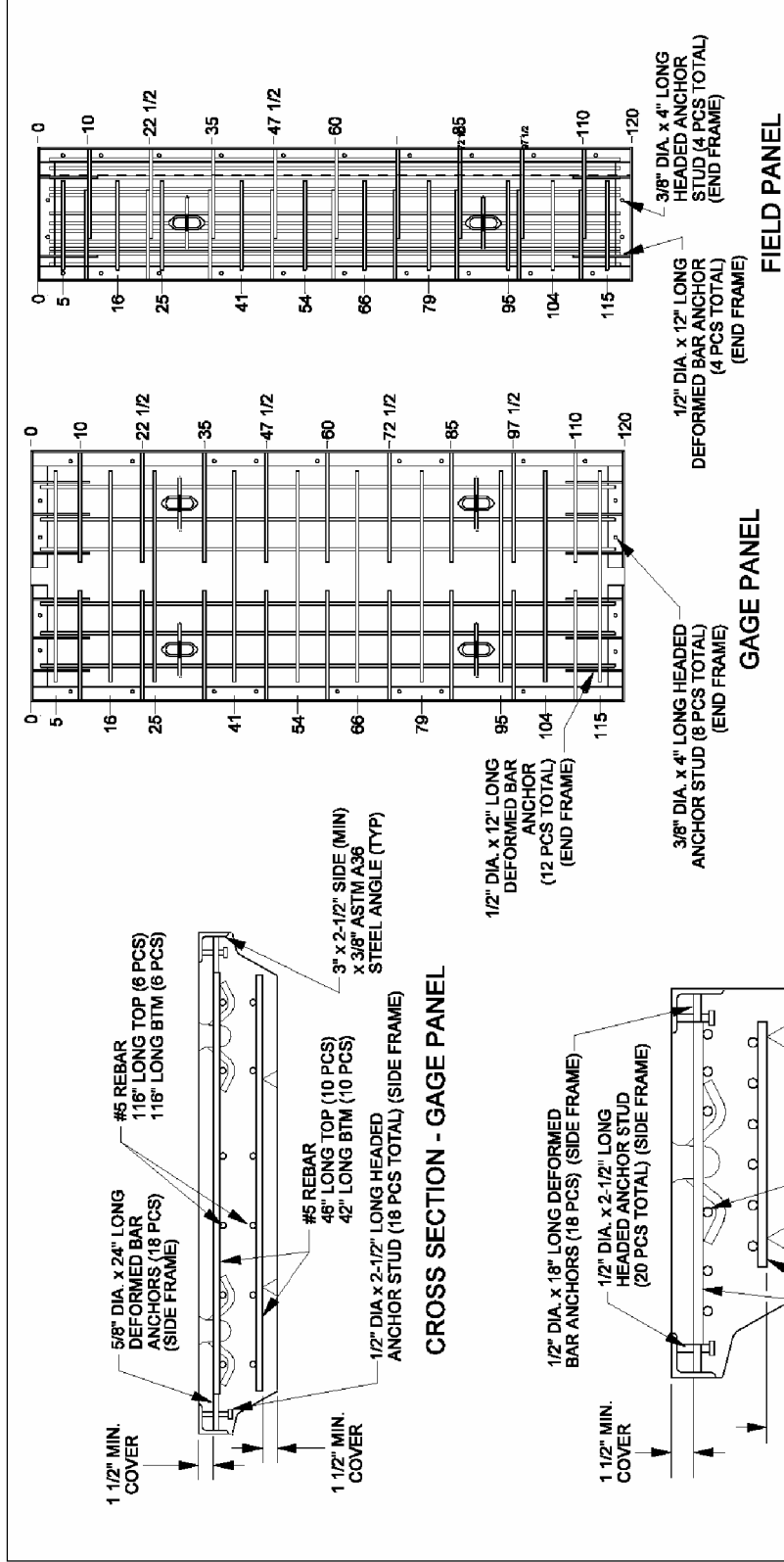
COMMON STANDARDS

PRESTRESSED CONCRETE PANELS FOR 10' CONCRETE TIES (10C)

FILE OWNER: UPRR DATE: APRIL 24, 2001
 REV. NO.: 0 DWG NO: 200301

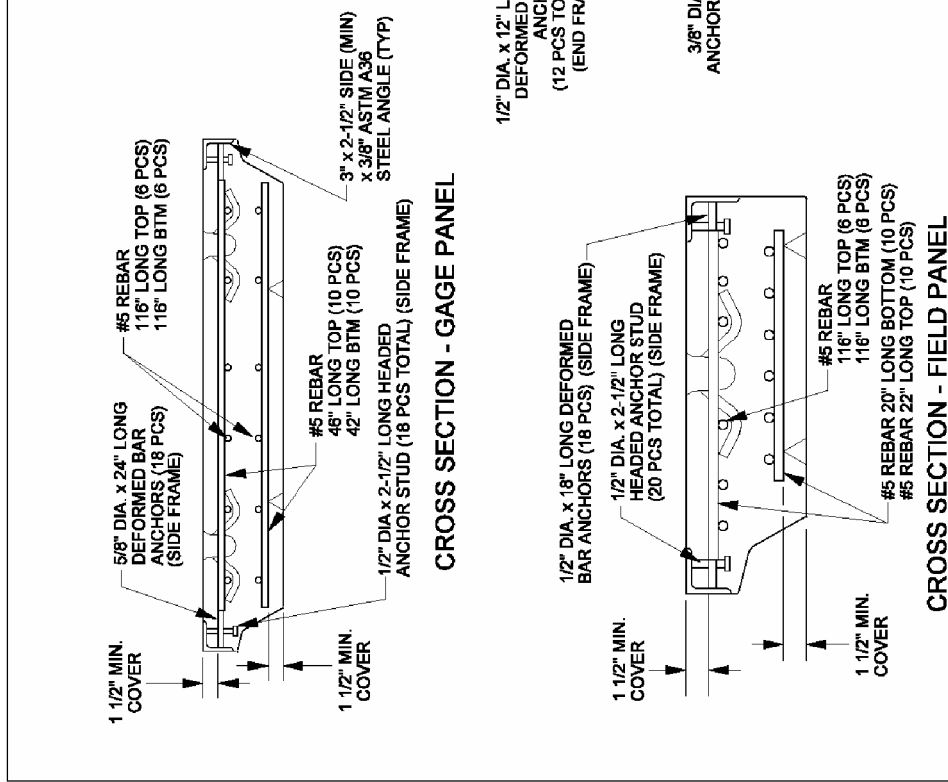
200301

ROAD CROSSING PANEL DETAILS



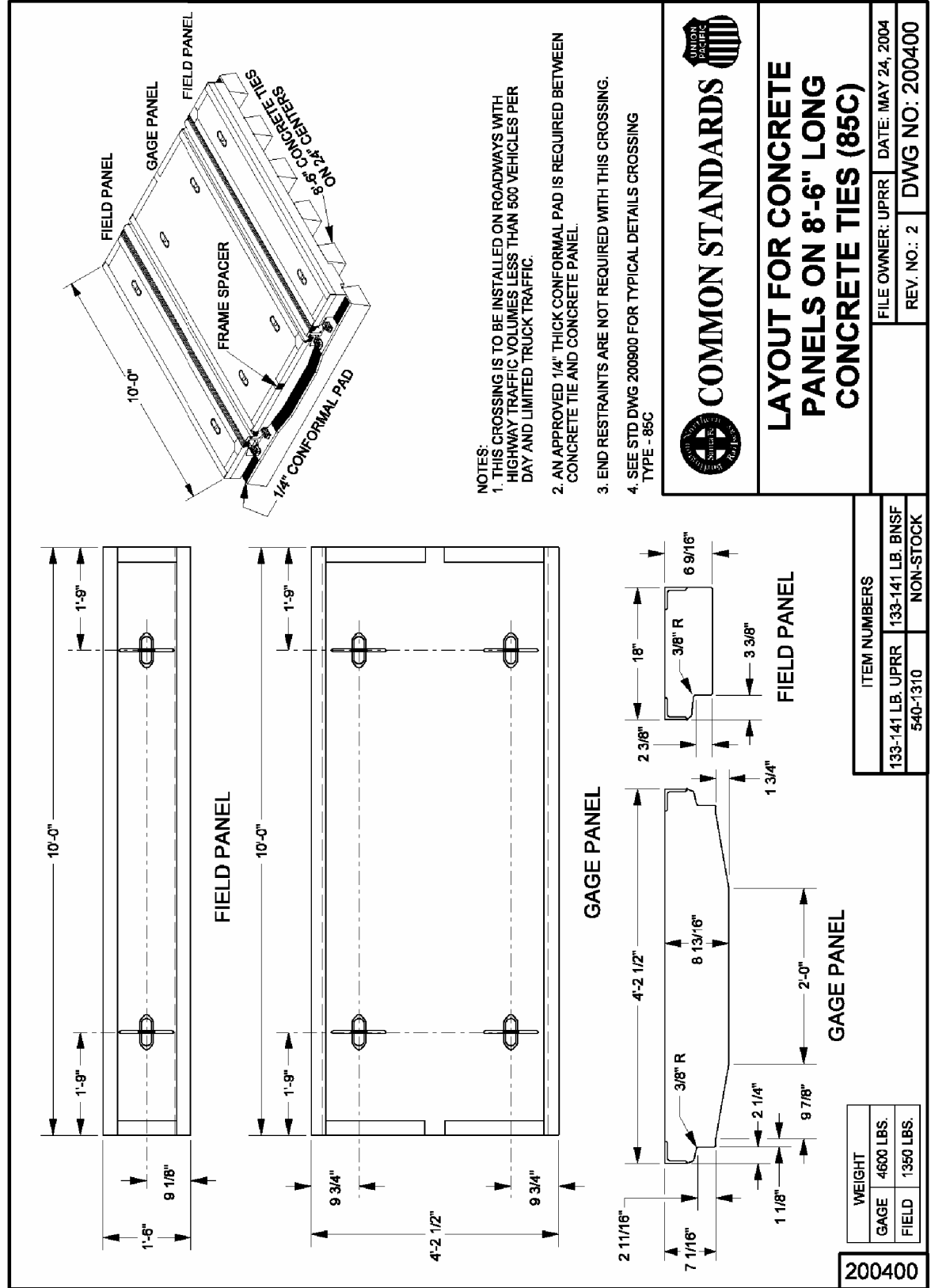
PRECAST CONCRETE PANELS FOR 10' CONCRETE TIES (10C)

FILE OWNER: UPRR | DATE: APRIL 24, 2001
 REV. NO.: 0 | DWG NO: 200302



NOTES:
 CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
 @ 28 DAYS = 6000 psi MINIMUM
 @ SHIPMENT = 4000 psi MINIMUM
 @ REMOVAL FROM FORMS = 2500 psi MINIMUM.
 CROSSING TYPE - 10C

200302



NOTES:
 1. THIS CROSSING IS TO BE INSTALLED ON ROADWAYS WITH HIGHWAY TRAFFIC VOLUMES LESS THAN 500 VEHICLES PER DAY AND LIMITED TRUCK TRAFFIC.
 2. AN APPROVED 1/4" THICK CONFORMAL PAD IS REQUIRED BETWEEN CONCRETE TIE AND CONCRETE PANEL.
 3. END RESTRAINTS ARE NOT REQUIRED WITH THIS CROSSING.
 4. SEE STD DWG 200800 FOR TYPICAL DETAILS CROSSING TYPE - 85C



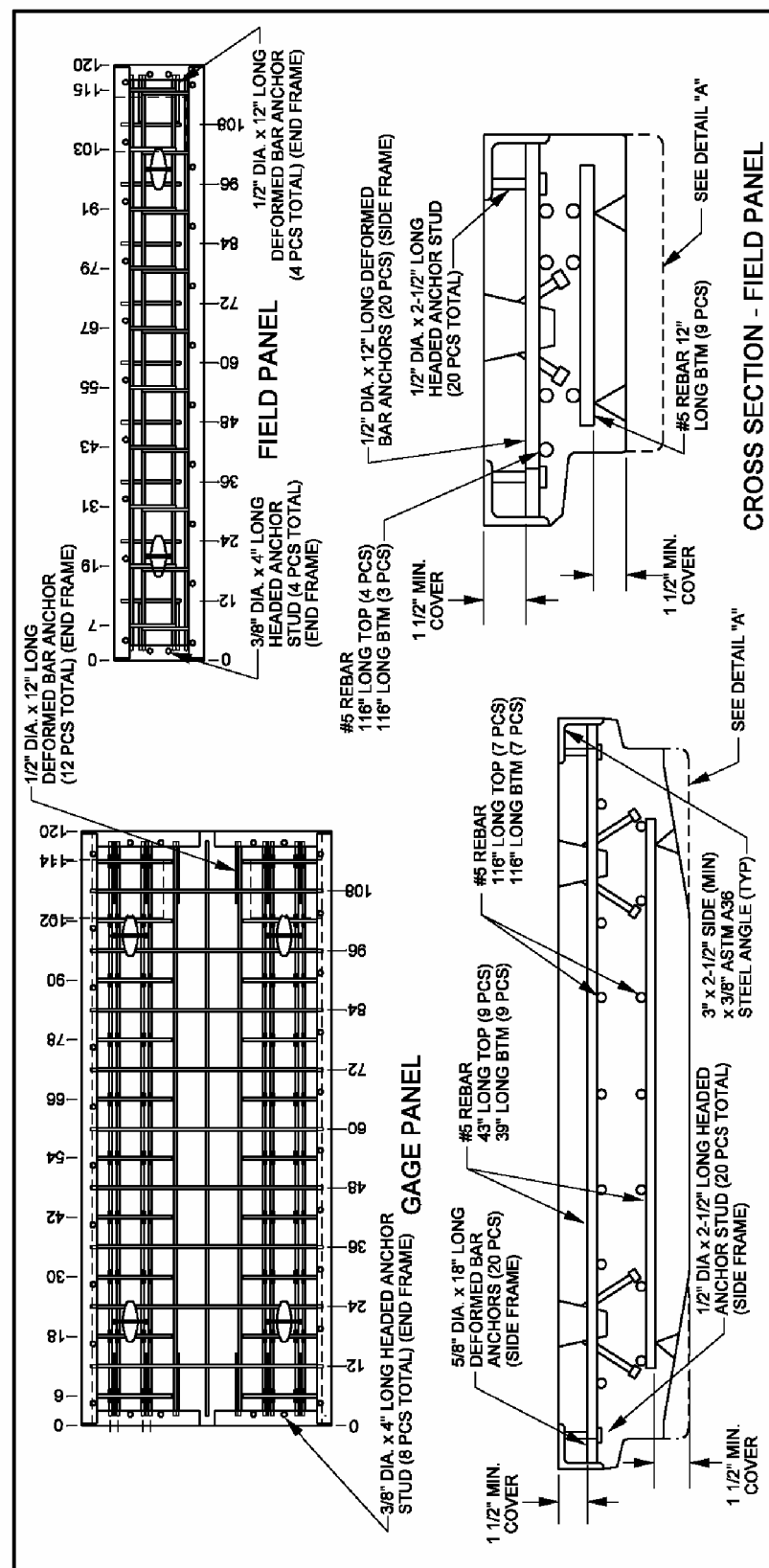
LAYOUT FOR CONCRETE PANELS ON 8'-6" LONG CONCRETE TIES (85C)

FILE OWNER: UPRR | DATE: MAY 24, 2004
 REV. NO.: 2 | DWG NO: 200400

ITEM NUMBERS
133-141 LB. UPRR
540-1310
133-141 LB. BNSF
NON-STOCK

200400

ROAD CROSSING PANEL DETAILS

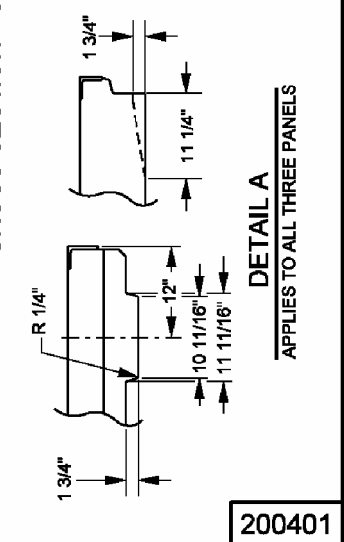


COMMON STANDARDS

PRECAST CONCRETE PANELS FOR 8'-6" CONCRETE TIES (85C)

FILE OWNER: UPRR DATE: MARCH 21, 2003
REV. NO.: 1 DWG NO.: 200401

NOTES:
1. CONCRETE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:
@ 28 DAYS = 6000 psi MINIMUM
@ SHIPMENT = 4000 psi MINIMUM
@ REMOVAL FROM FORMS = 2500 psi MINIMUM.
2. CROSSING TYPE - 10C



200900

TYPICAL SHUNT SPACER DETAIL (ALL PANELS)

END FRAME DETAIL (ALL PANELS)

TYPICAL PREATTACHED FLANGWAY FILLER (ALL PANELS)

LAG HOLE DETAIL (9W & 10W)

FIELD PANEL (9W, 10W, & 10C)

GAGE PANEL (9W, 10W, & 10C)

WELD DETAIL (ALL PANELS)

END DETAIL (ALL PANELS)

BLOCKOUT DEPTH = 3"

TYPICAL LIFTING DEVICE AND BLOCKOUT (ALL PANELS)

COMMON STANDARDS

TYPICAL DETAILS FOR CONCRETE PANELS

FILE OWNER: UPRR DATE: APRIL 30, 2003
REV. NO.: 3 DWG NO.: 200900

ROAD CROSSING PANEL DETAILS

200901

MATERIAL SPECIFICATIONS:

- 1) STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36 SPECIFICATIONS. WELDING TO BE PER AWS CODE.
- 2) ALL EXPOSED STEEL TO RECEIVE ONE COAT PRIMER.
- 3) END ANGLES FOR GAGE PANEL SHOULD HAVE 3" GAP MINIMUM TO IMPROVE SHUNT RESISTANCE. REINFORCING MATERIAL AND CLADDING TO BE CONSTRUCTED TO MEET SHUNTING REQUIREMENT. A NON-CONDUCTIVE SPACER TO BE ATTACHED TO GAGE FRAME.
- 4) CLADDING ON ENDS OF PANELS SHOULD EXTEND BEYOND CONCRETE 1/8" (+1/8", -0") TO IMPROVE MATCH WITH ADJACENT PANELS.
- 5) REINFORCING STEEL SHALL CONFORM TO CURRENT ASTM A615 SPECIFICATION, GRADE 60. IF ANY WELDING OF REINFORCEMENT STEEL IS REQUIRED, MATERIAL SHALL CONFORM TO ASTM A706 SPECIFICATION, GRADE 60.
- 6) CONCRETE MATERIAL MIXING, PLACING AND CURING TO BE IN ACCORDANCE WITH PCI "MANUAL FOR QUALITY CONTROL: PRECAST AND PRESTRESSED CONCRETE," MANUAL 115, EDITION 4. CEMENT SHALL HAVE NO MORE THAN 0.8% TOTAL ALKALI CONTENT. MAXIMUM WATER/CEMENT RATIO=0.44 (BY WEIGHT). AIR ENTRAINMENT=6%+/- 1% IN PLASTIC CONCRETE. SLUMP 3" MAXIMUM.
- 7) COPIES OF THE CONCRETE DESIGN MIX TO BE SUBMITTED TO RAILROADS FOR APPROVAL PRIOR TO THE START OF THE CASTING OPERATION.
- 8) TOP SURFACE SHALL BE NON-CRACK DESIGN AND IS TO BE SEALED TO PREVENT ION MIGRATION DUE TO SALTING.
- 9) CURING SHALL FOLLOW THE RECOMMENDATIONS AND PROCEDURES OF PCI IN 4TH EDITION DIVISION 4.
- 10) 3/16" WEEP/INSPECTION HOLES SHALL BE PLACED EVERY 2-FT. MIN. ALONG THE TOP OF THE STEEL FRAME ALONG A LINE 3/4" FROM OUTSIDE EDGE.
- 11) FLANGEWAY FILLER TO BE PERMANENTLY PREATTACHED AND HAVE THE FOLLOWING PROPERTIES:

- TENSILE STRENGTH (ASTM D412) 850PSI MIN.
- ULTIMATE ELONGATION (ASTM D412) 400% MIN.
- TEAR STRENGTH (ASTM D624) AT 25 DEGREES CELSIUS, 150-PLI MIN.
- HARDNESS (ASTM D2240) 75+/-5% SHORE A.
- COMPRESSION SET (ASTM 395 METHOD B) 100 DEGREES CELSIUS FOR 70 HOURS 45% MAX.
- ACCELERATED AGING TEST (ASTM D573) 70 HOURS AT 100 DEGREES CELSIUS MUST NOT EXHIBIT A REDUCTION IN PROPERTIES BY GREATER THAN 20%.
- OZONE RESISTANCE TEST (ASTM D518) MUST HAVE NO CRACKING AFTER EXPOSURE TO 50-PPHM OZONE FOR 96 HOURS AT 40 DEGREES CELSIUS.
- VOLUME RESISTIVITY = 1×10^{12} (OHM-CM) OR GREATER (ASTM D257), BUT USING 18% NaCl/WATER SOLUTION IN PLACE OF DISTILLED WATER FOR 168 HOURS AT 25 DEGREES CELSIUS AND TESTED AT 500 VDC.
- ELECTRICAL RESISTANCE: MINIMUM RESISTANCE 10 MEGA OMS MEASURED AT 500 VDC.
- LOW TEMPERATURE BRITTLENESS (ASTM D2137) AT -40 DEGREES CELSIUS.
- A SAMPLE SECTION OF THE FLANGEWAY MATERIAL SHALL BE PHYSICALLY TESTED BY APPLYING A LATERAL FORCE OF 10 LB/IN AT 50 DEGREES CELSIUS. THE MAXIMUM LATERAL DISPLACEMENT OF THE TEST IS NOT TO EXCEED 1/4" (CROSSING TYPE 10C ONLY). TEST RESULTS MUST BE SUBMITTED FOR RAILROAD APPROVAL.
- MANUFACTURER TO DESIGN THE PREATTACHED FLANGEWAY FILLER TO ALLOW FOR REMOVAL OF PANELS FOR MAINTENANCE WITHOUT DAMAGING THE FLANGEWAY FILLER OR ANY OTHER COMPONENTS DESIGNED TO HOLD IT TOGETHER.

TOLERANCES:

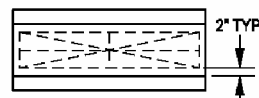
- 1) OUT OF SQUARE 3/16" (MEASURED ALONG THE DIAGONAL)
- 2) LENGTH, WIDTH, AND THICKNESS: +/-1/8"
- 3) THE BOTTOM SURFACE, WHICH WILL BE IN CONTACT WITH THE TIES, SHALL NOT UNDULATE IN ANY DIRECTION MORE THAN 3/32". SEE SPECIAL TESTING NOTE 3 BELOW.
- 4) REINFORCEMENT PLACEMENT SHALL BE +/-3/4" HORIZONTAL, +/-1/8" VERTICAL.

FINISH:

- 1) ALL RECESSES AND MINOR CONCRETE SPALLS ARE TO BE FILLED AND FINISHED TO THE PANEL DIMENTIONS USING THE PROPER BONDING AGENT AND REPAIR MATERIAL. SURFACE OF THE REPAIRED AREA IS TO MATCH THE COLOR AND TEXTURE OF THE SURROUNDING AREAS.
- 2) THE DRIVING SURFACE IS TO HAVE A LIGHT BROOM FINISH OR AS APPROVED BY RAILROADS. THE ADDITION OF WATER TO THE CONCRETE SURFACE FINISH DURING CASTING IS NOT PERMITTED.

SPECIAL TESTING:

- 1) TWICE ANNUALLY, VENDORS SHALL SUBMIT (VIA AN INDEPENDENT TESTING LABORATORY TO THE RAILROADS) THE FOLLOWING TEST ON THE APPROVED MIXED DESIGN:
 - ASTM C666 FREEZE/THAW
 - ASTM C227 MORTAR BAR METHOD
 - ASTM C1260 AT TOTAL ALKALI BURDEN = 0.06%
- 2) GAGE PANELS SHALL BE DESIGNED WITH SHUNT RESISTANT FEATURES IN ORDER TO PROVIDE A MINIMUM ELECTRICAL RESISTANCE IN ACCORDANCE WITH THE STANDARD ELECTRICAL TEST (DWG 500930).
- 3) A REPRESENTATIVE SAMPLE OF PANELS SHALL BE CHECKED PERIODICALLY FOR BOTTOM FLATNESS BY USING A STRAIGHT EDGE CALIBRATED TO WITHIN +/-1/32" AND A TAPER GAGE AS FOLLOWS: 8 POSITIONS OF FLATBAR (---) CHECK FLATNESS AT EACH POSITION USING TAPER GAGE.



GENERAL:

- 1) THE MANUFACTURER SHALL BE ISO 9000 OR AAR M-1003 CERTIFIED. ALL TESTING PERSONNEL SHALL BE A MINIMUM OF ACI LEVEL 1 CERTIFIED.
- 2) THE FABRICATOR SHALL BE RESPONSIBLE FOR LOADING AND PROPERLY SECURING ALL PRECAST CONCRETE MEMBERS FOR SHIPMENT.
- 3) THE MANUFACTURER SHALL WARRANTY PRODUCT FOR A MINIMUM OF TEN YEARS AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP.
- 4) MANUFACTURER TO PERMANENTLY MARK EACH PANEL WITH A CONCRETE IMPRINT FOR SIZE OF RAIL, WEIGHT OF PANEL, MANUFACTURER'S I.D., MONTH/DAY/YEAR OF MANUFACTURE, AND CROSSING TYPE. END OF EACH PANEL TO BE STENCILED PAINTED WITH SIZE OF RAIL, WEIGHT OF PANEL AND CROSSING TYPE.



COMMON STANDARDS

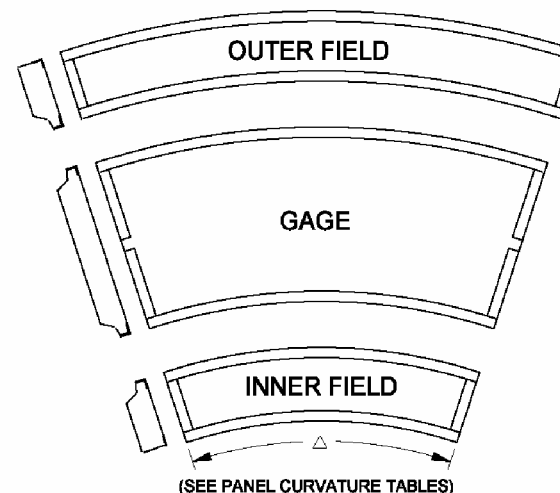


GENERAL SPECIFICATIONS FOR ROAD CROSSINGS WITH CONCRETE PANELS

FILE OWNER: UPRR DATE: MARCH 21, 2003

REV. NO.: 1 DWG NO:200901

200902



CURVATURE TABLE (ON CONCRETE TIES)

DEGREE OF CURVE	RADIUS IN FEET	Δ	CURVE PANEL?
2° OR LESS	2865'	0.20°	NO
3°	1910'	0.30°	YES
4°	1433'	0.40°	YES
5°	1146'	0.50°	YES
6°	965'	0.60°	YES
7°	819'	0.70°	YES
8°	717'	0.80°	YES
9°	637'	0.90°	YES
10°	574'	1.00°	YES
11°	522'	1.10°	YES
12°	478'	1.20°	YES
13°	442'	1.30°	YES
14°	410'	1.40°	YES

CURVATURE TABLE (ON WOOD TIES)

DEGREE OF CURVE	RADIUS IN FEET	Δ	CURVE PANEL?
3° OR LESS	1910'	0.24°	NO
4°	1433'	0.32°	YES
5°	1146'	0.40°	YES
6°	955'	0.48°	YES
7°	819'	0.56°	YES
8°	717'	0.66°	YES
9°	637'	0.74°	YES
10°	574'	0.82°	YES
11°	522'	0.90°	YES
12°	478'	0.98°	YES
13°	442'	1.06°	YES
14°	410'	1.14°	YES

NOTES:
A CURVED PANEL IS A PANEL THAT IS PIE SHAPED WITH A LONGER OUTER LENGTH THAN THE INNER LENGTH WITH TRUE RADIUSED OUTER AND INNER STEEL.

CURVED PANELS USE STANDARD REINFORCEMENT SIMILAR TO TANGENT PANEL STANDARD REINFORCEMENT.

LAG HOLES ON 10W AND 9W CROSSINGS MUST LINE UP WITH THE CENTERLINE OF TIES.



COMMON STANDARDS



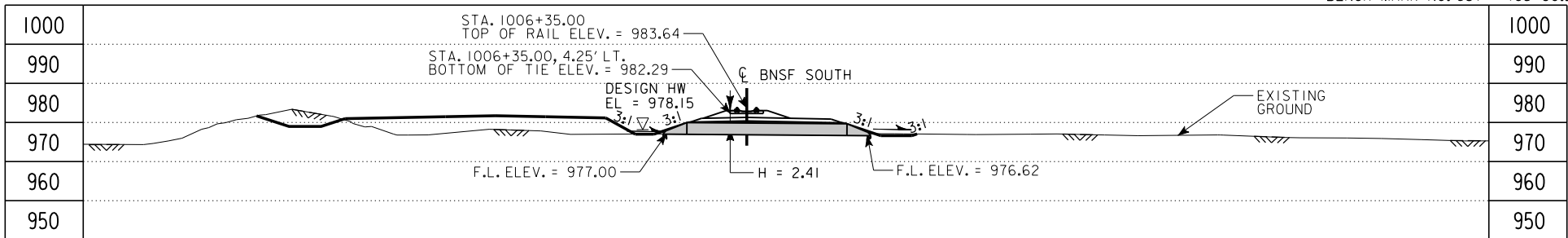
CURVED CONCRETE PANELS

XING TYPE (RAIL WT.)	BNSF ITEM NO.	UPRR ITEM NO.
10W (115)	055590002	NON-STOCK
10W (133-141)	055590001	NON-STOCK
9W	NON-STOCK	NON-STOCK
10C	NON-STOCK	NON-STOCK
85C	NON-STOCK	NON-STOCK

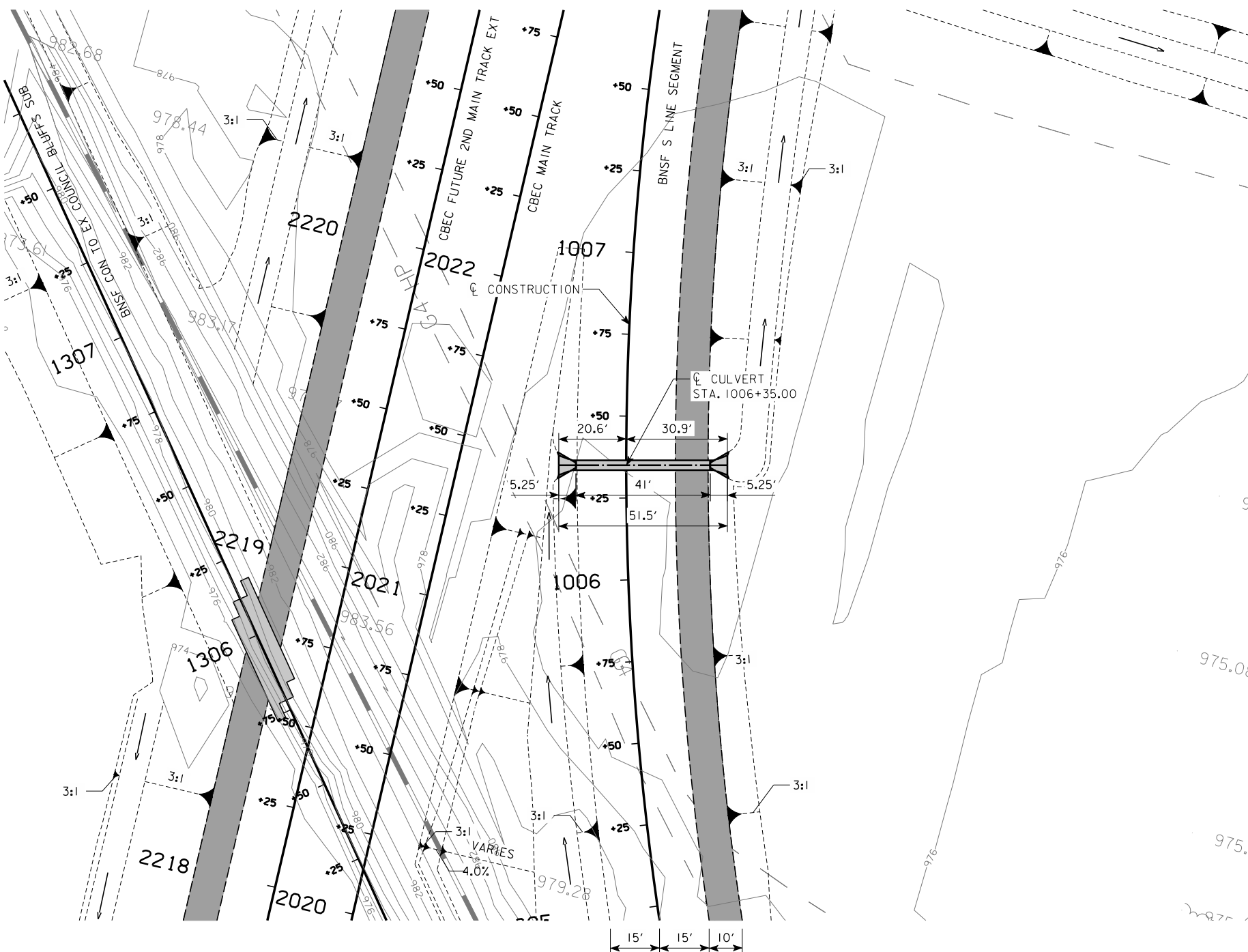
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REV. NO.: 0 DWG NO:200902

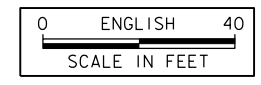
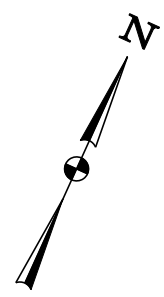
ROAD CROSSING PANEL DETAILS



LONGITUDINAL SECTION ALONG ϕ CULVERT



PLAT PLAN



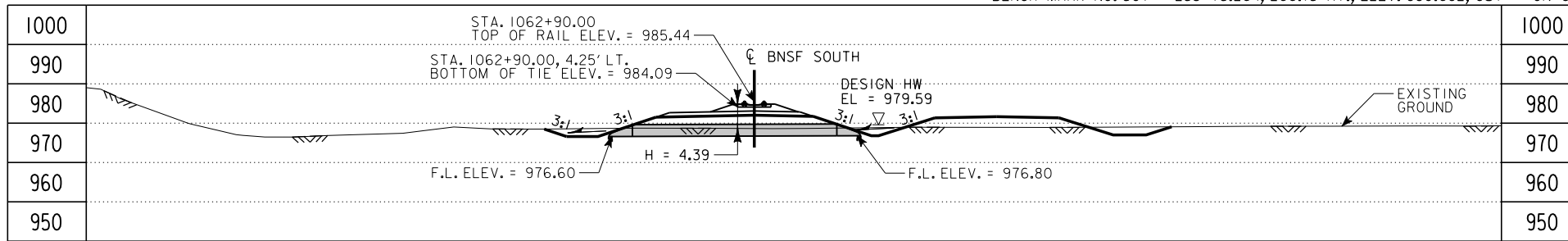
LOCATION

BNSF SOUTH LINE SEGMENT
 T-74 N R-43 W
 SECTION 18
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

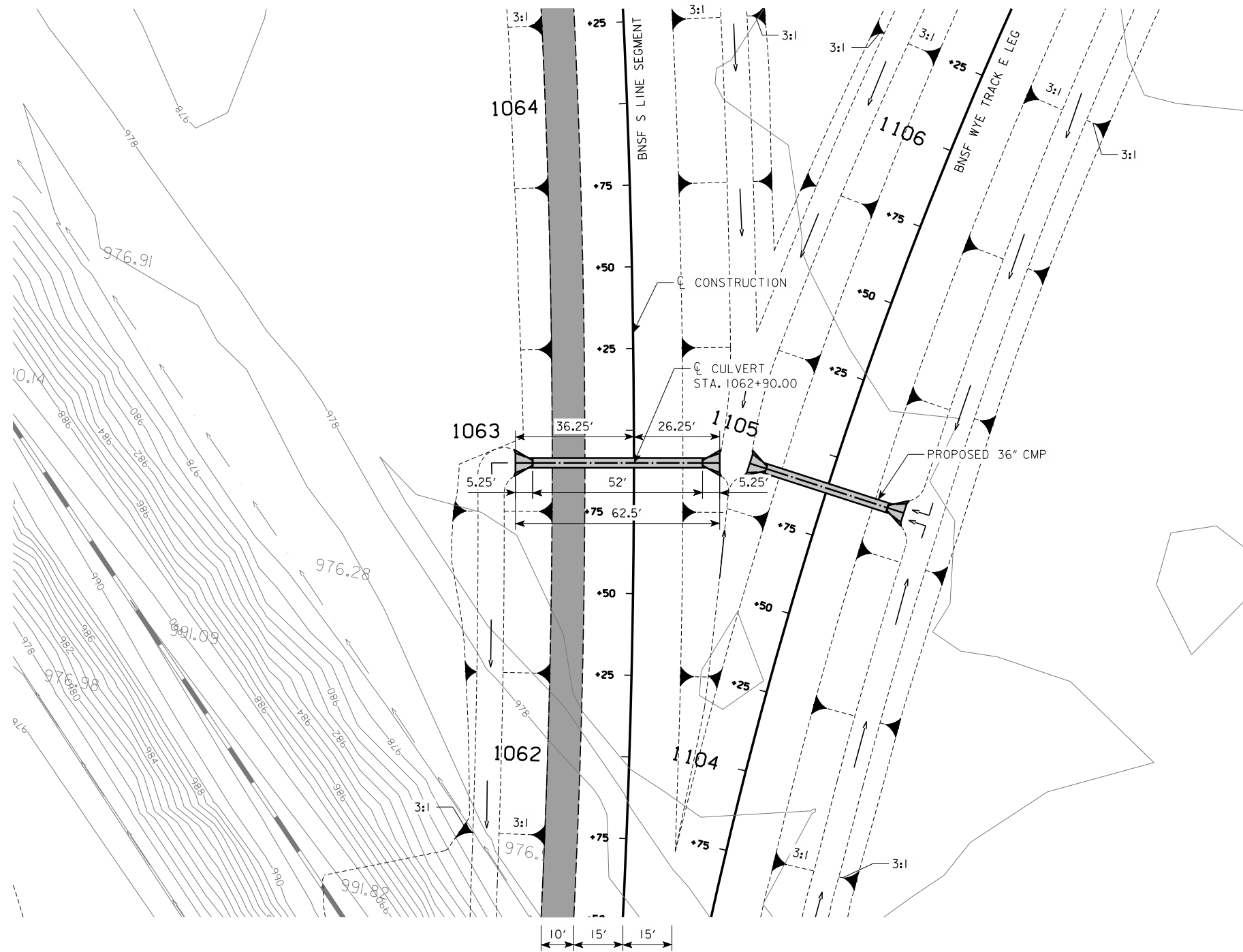
HYDRAULIC DATA

DRAINAGE AREA = 0.6 ACRES - HILLY
 Q₅₀ = 4.4 CFS
 HW ELEV. = 978.04
 Q₁₀₀ = 5.3 CFS
 HW ELEV. = 978.15

PRELIMINARY
 DESIGN FOR 0° SKEW
36 in. x 41 ft.
CORRUGATED METAL PIPE
PLAT PLAN
 STATION 1006+35.00 (ϕ BNSF South) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ϕ CULVERT



PLAT PLAN



LOCATION

BNSF SOUTH LINE SEGMENT
T-74 N R-43 W
SECTION 7
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

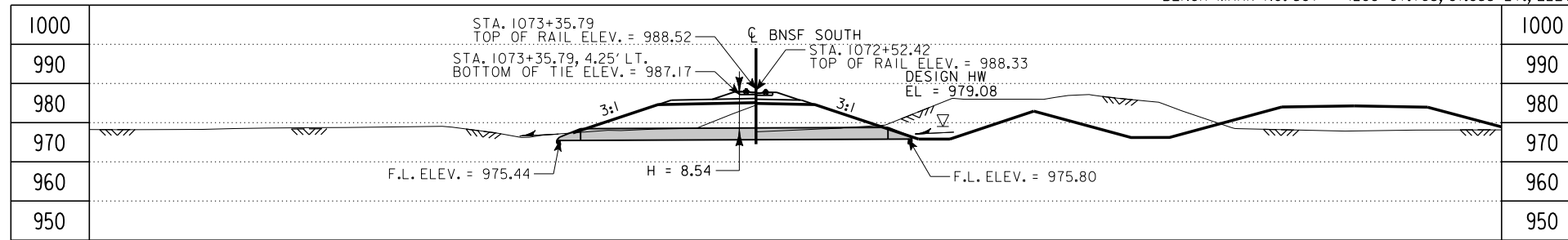
DRAINAGE AREA = 12.1 ACRES - FLAT

Q₅₀ = 20.6 CFS
HW ELEV. = 979.30

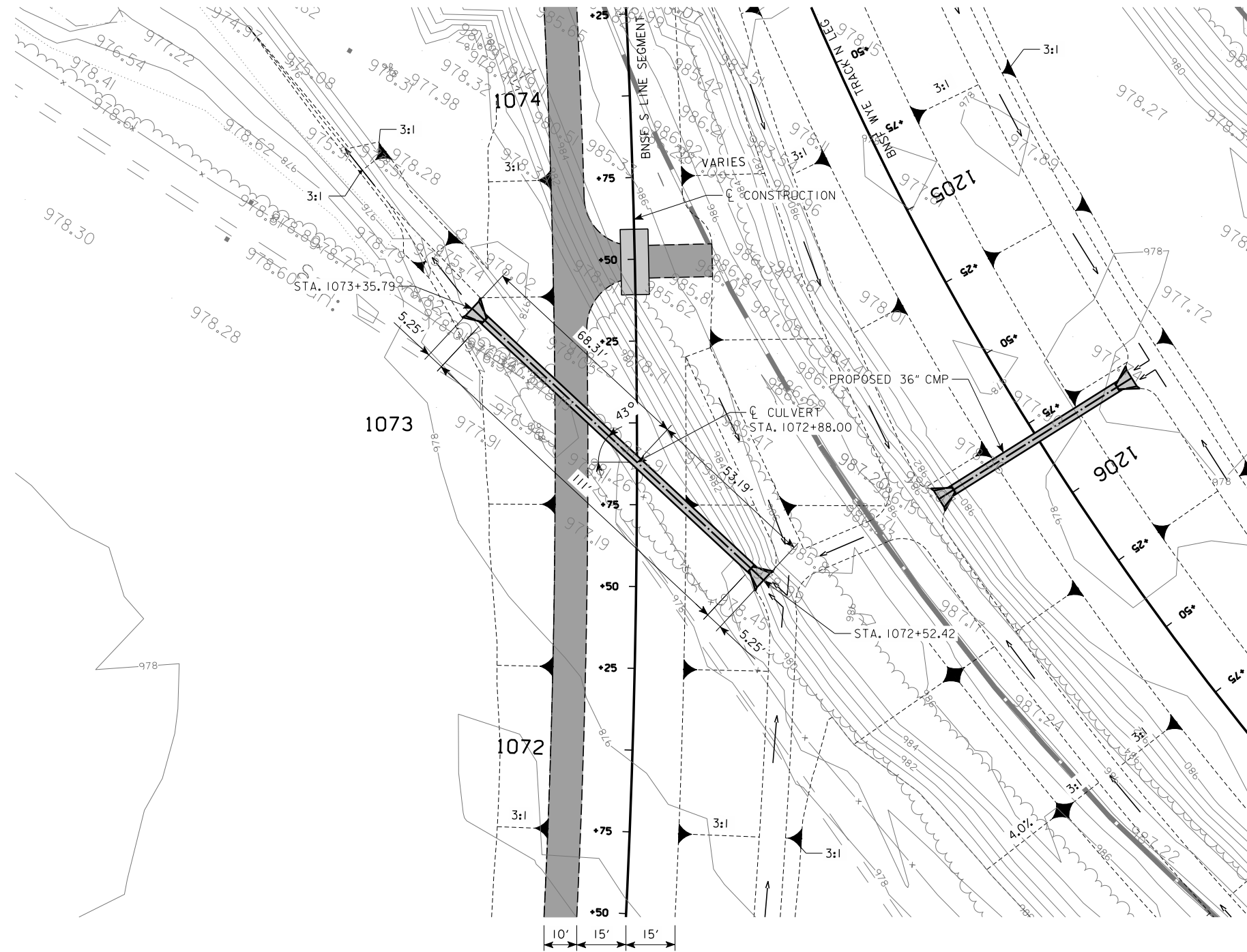
Q₁₀₀ = 24.7 CFS
HW ELEV. = 979.59

PRELIMINARY

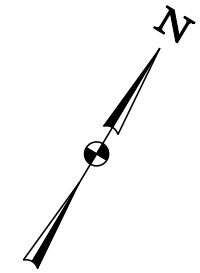
DESIGN FOR 0° SKEW
36 in. x 52 ft.
CORRUGATED METAL PIPE
PLAT PLAN
STATION 1062+90.00 (ϕ BNSF South) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION AT CULVERT INVERTS



PLAT PLAN



LOCATION

BNSF SOUTH LINE SEGMENT
T-74 N R-43 W
SECTION 7
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

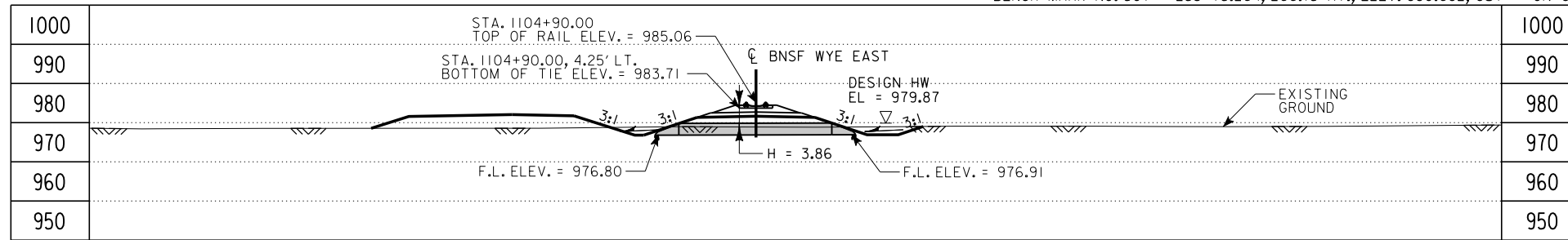
DRAINAGE AREA = 15.4 ACRES - FLAT

Q₅₀ = 24.5 CFS
HW ELEV. = 978.69

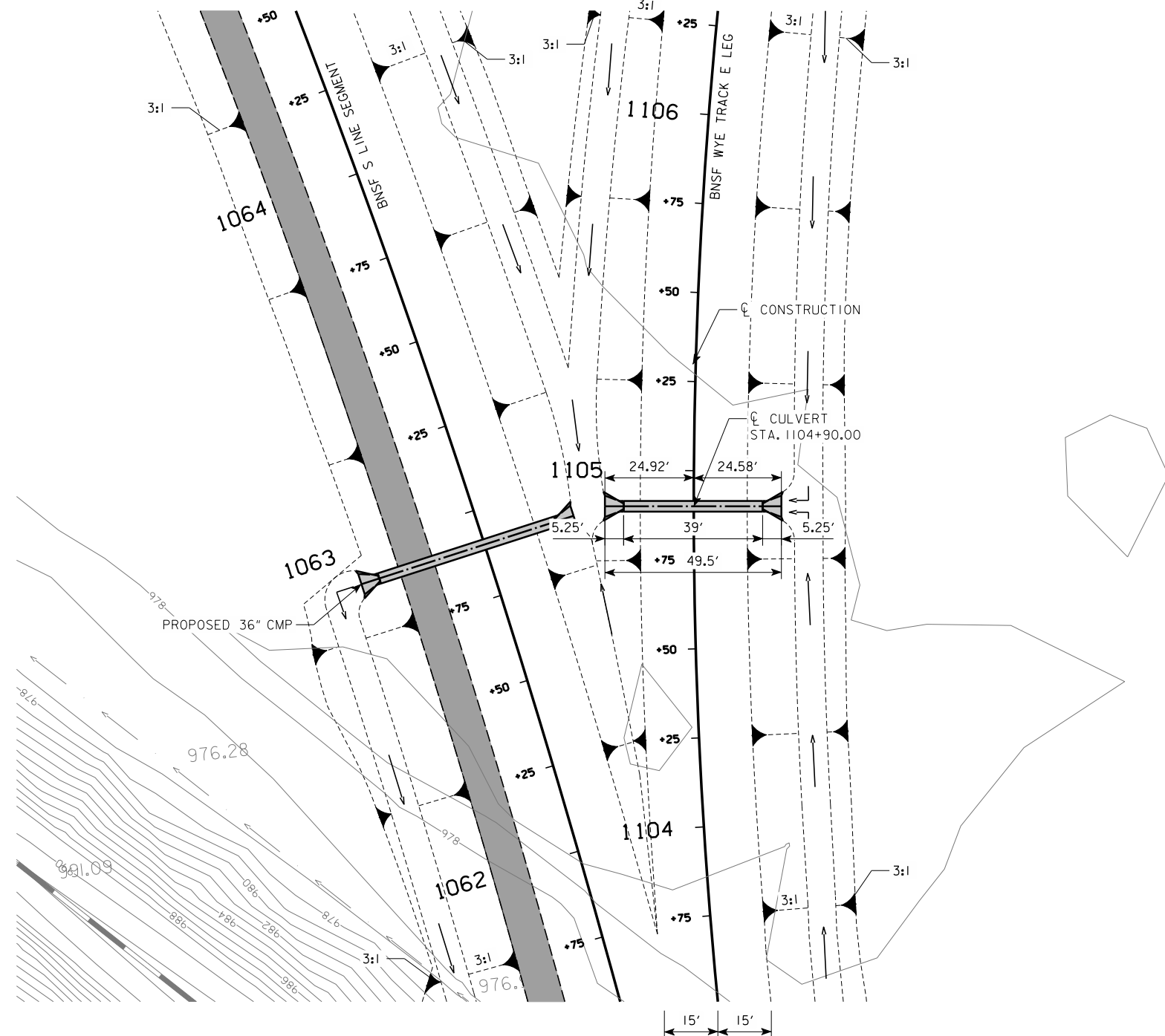
Q₁₀₀ = 29.4 CFS
HW ELEV. = 979.08

PRELIMINARY

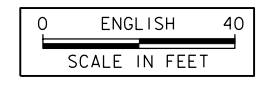
DESIGN FOR 43° SKEW, LT. AHEAD
36 in. x 111 ft.
CORRUGATED METAL PIPE
PLAT PLAN
STATION 1072+88.00 (C BNSF South) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ϕ CULVERT



PLAT PLAN



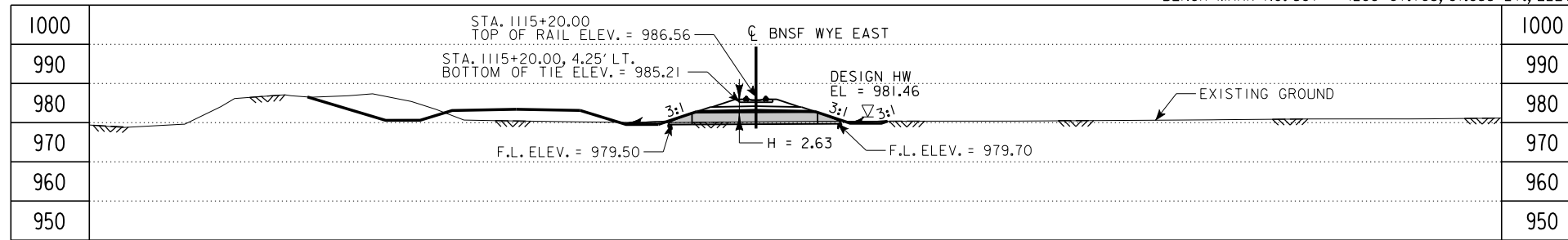
LOCATION

BNSF WYE TRACK EAST LEG
 T-74 N R-43 W
 SECTION 7
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

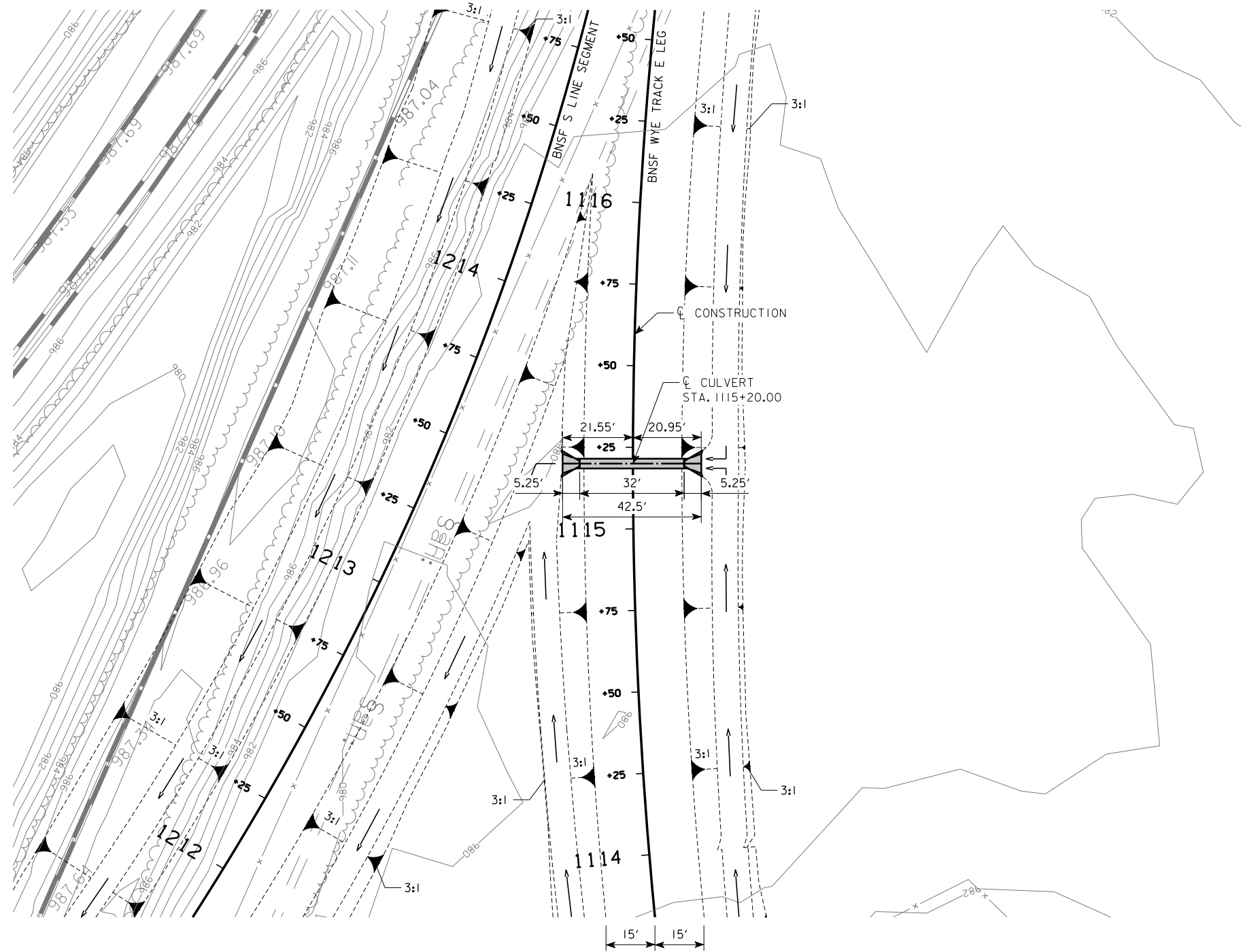
HYDRAULIC DATA

DRAINAGE AREA = 10.2 ACRES - FLAT
 Q₅₀ = 18.0 CFS
 HW ELEV. = 979.53
 Q₁₀₀ = 21.6 CFS
 HW ELEV. = 979.87

PRELIMINARY
 DESIGN FOR 0° SKEW
36 in. x 39 ft.
CORRUGATED METAL PIPE
PLAT PLAN
 STATION 1104+90.00 (ϕ BNSF WYE EAST) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ϕ CULVERT



PLAT PLAN

LOCATION

BNSF WYE TRACK EAST LEG
 T-74 N R-43 W
 SECTION 7
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 4.3 ACRES - FLAT
 Q₅₀ = 9.6 CFS
 HW ELEV. = 981.30
 Q₁₀₀ = 11.5 CFS
 HW ELEV. = 981.46

PRELIMINARY

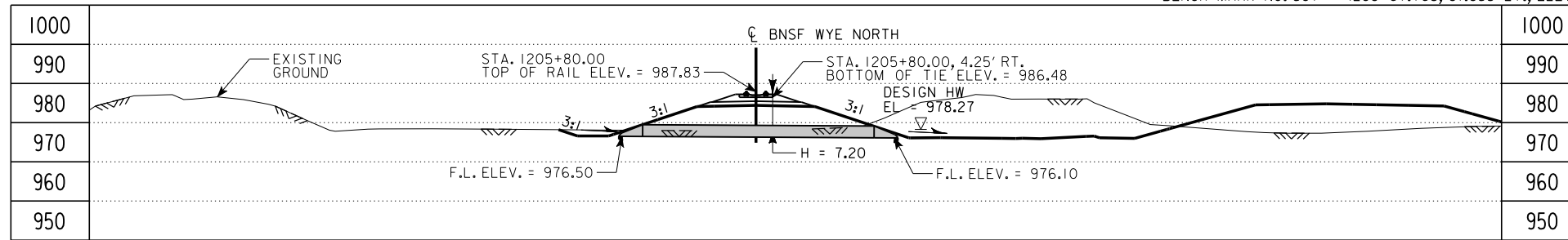
DESIGN FOR 0° SKEW
36 in. x 32 ft.
CORRUGATED METAL PIPE

PLAT PLAN

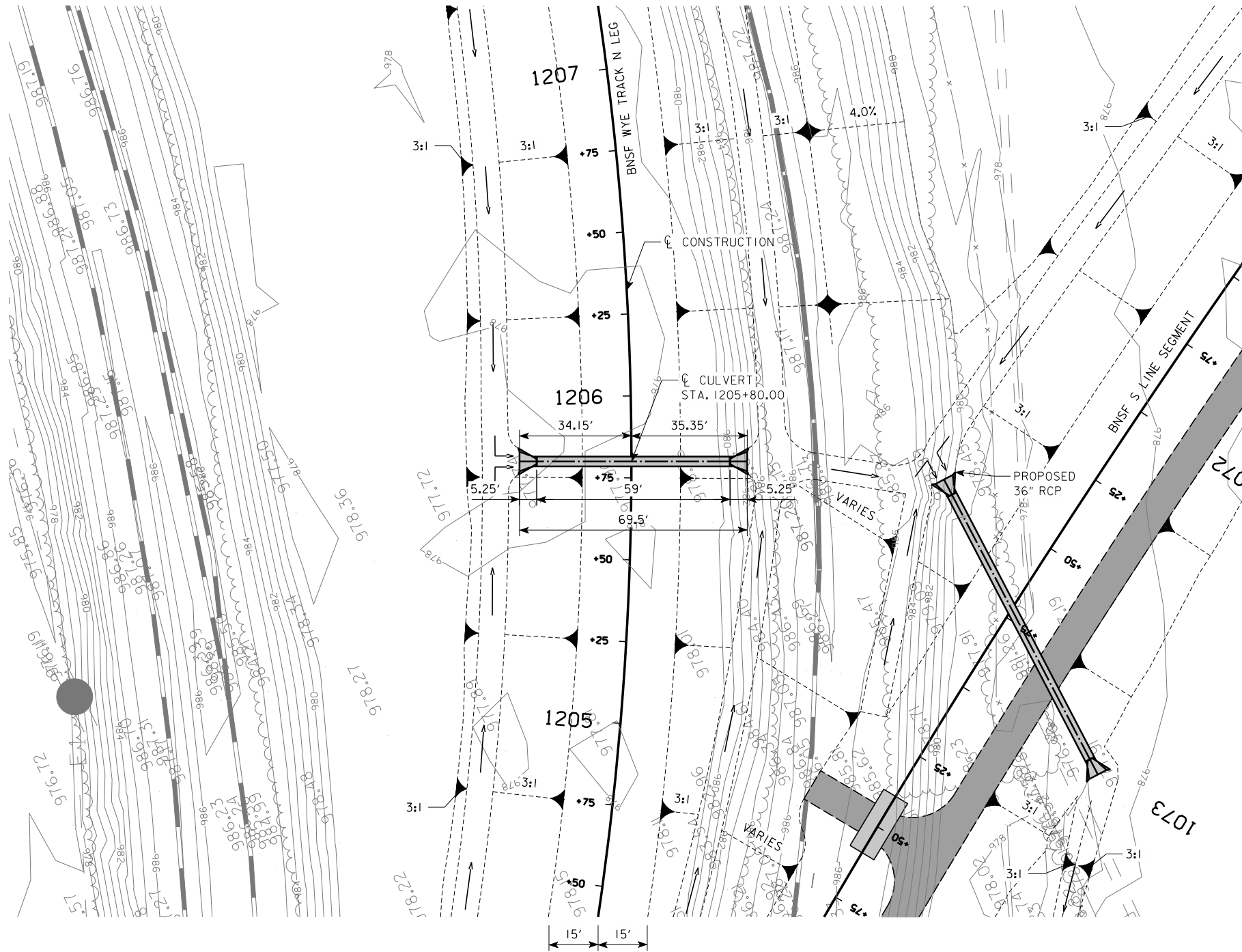
STATION 1115+20.00 (ϕ BNSF WYE EAST) JANUARY 2011

POTTAWATTAMIE COUNTY

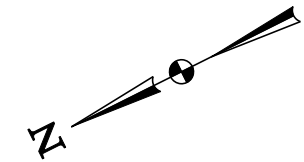
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN



LOCATION

BNSF WYE TRACK NORTH LEG
T-74 N R-43 W
SECTION 7
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

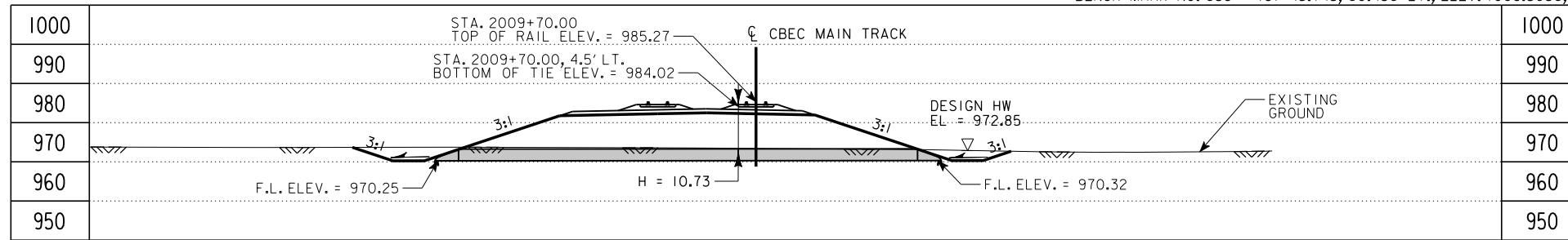
HYDRAULIC DATA

DRAINAGE AREA = 4.4 ACRES - FLAT
Q₅₀ = 9.7 CFS
HW ELEV. = 978.10
Q₁₀₀ = 11.6 CFS
HW ELEV. = 978.27

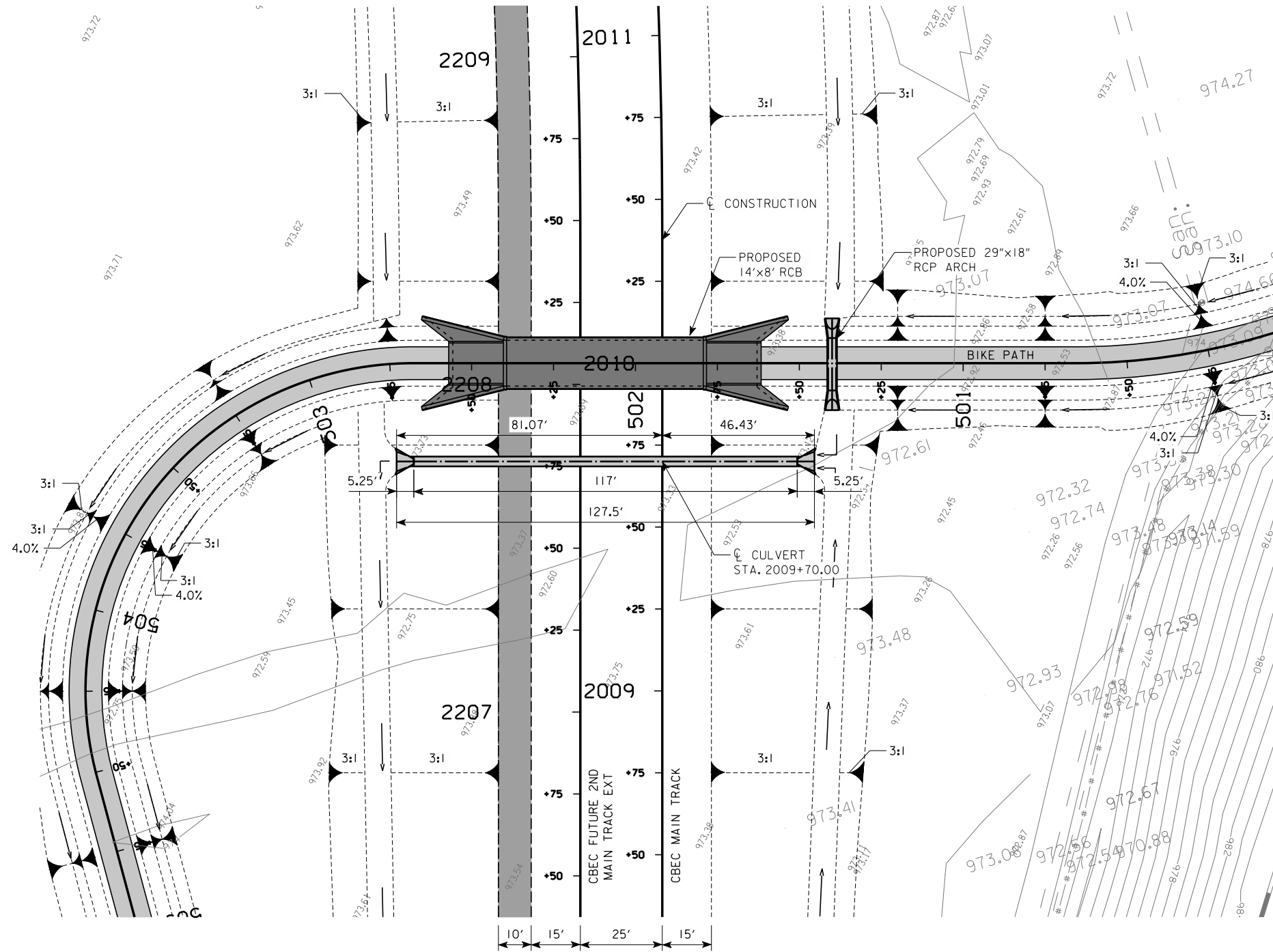
PRELIMINARY

DESIGN FOR 0° SKEW
36 in. x 59 ft.
CORRUGATED METAL PIPE

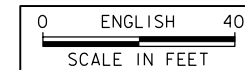
PLAT PLAN
STATION 1205+80.00 (\bar{C} BNSF WYE NORTH) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN



LOCATION

CBEC MAIN TRACK
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

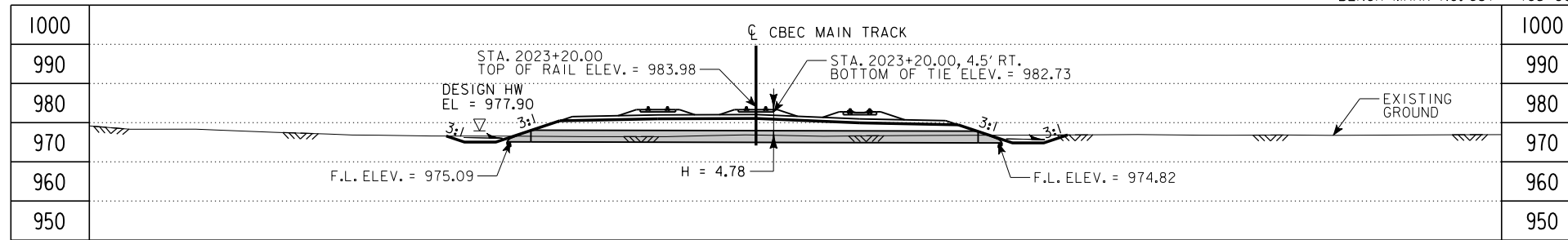
HYDRAULIC DATA

DRAINAGE AREA = 7.9 ACRES - FLAT
Q₅₀ = 15.0 CFS
HW ELEV. = 972.61
Q₁₀₀ = 18.0 CFS
HW ELEV. = 972.85

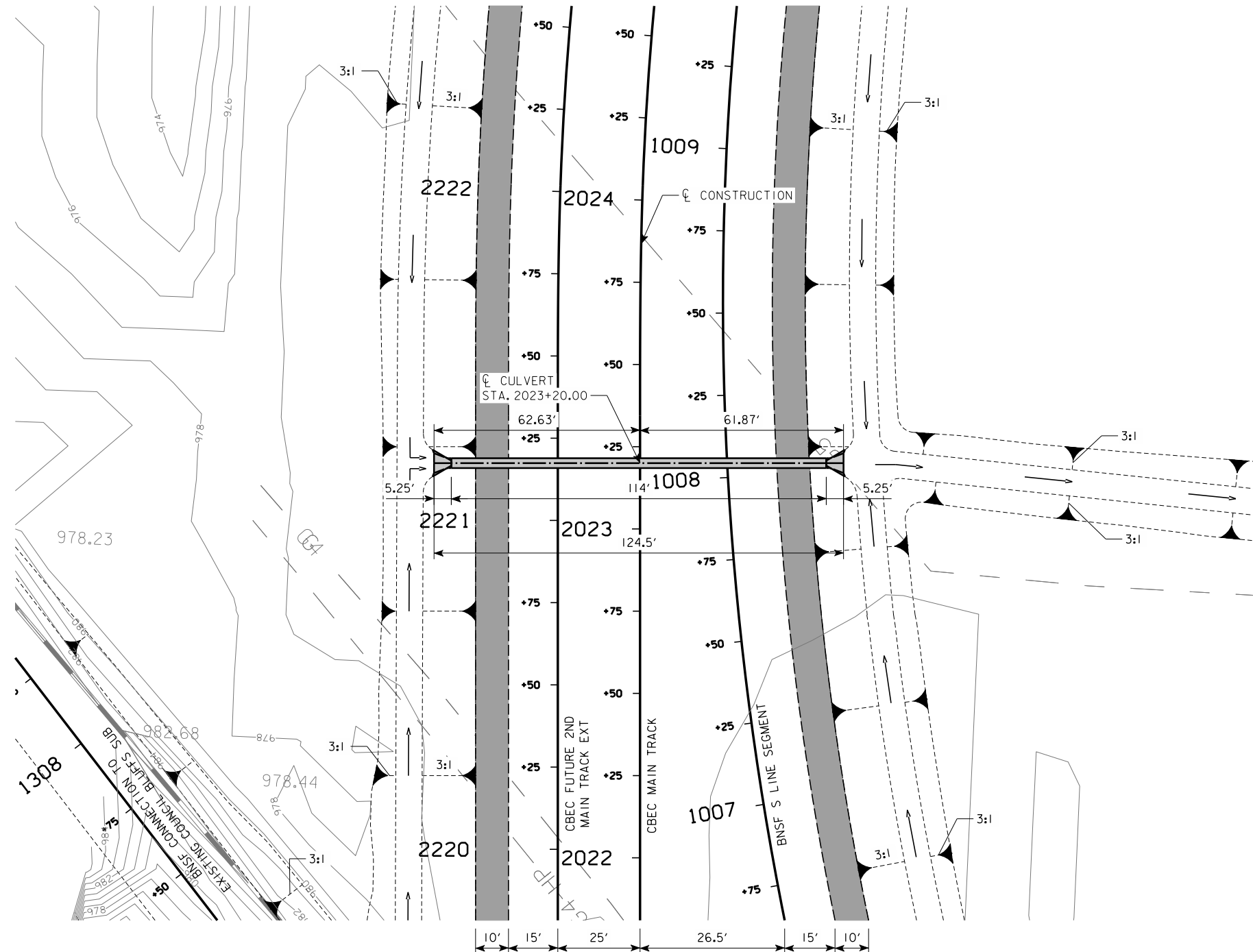
PRELIMINARY

DESIGN FOR 0° SKEW
36 in. x 117 ft.
CORRUGATED METAL PIPE

PLAT PLAN
STATION 2009+70.00 (\bar{C} CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG ϕ CULVERT



PLAT PLAN

LOCATION

CBEC MAIN TRACK
 T-74 N R-43 W
 SECTION 18
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA

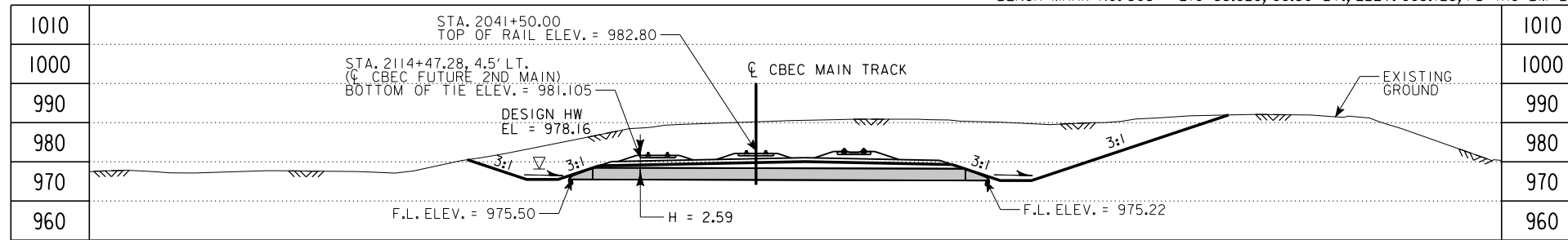
DRAINAGE AREA = 11.0 ACRES - FLAT
 Q_{50} = 19.1 CFS
 HW ELEV. = 977.60
 Q_{100} = 22.9 CFS
 HW ELEV. = 977.90

PRELIMINARY

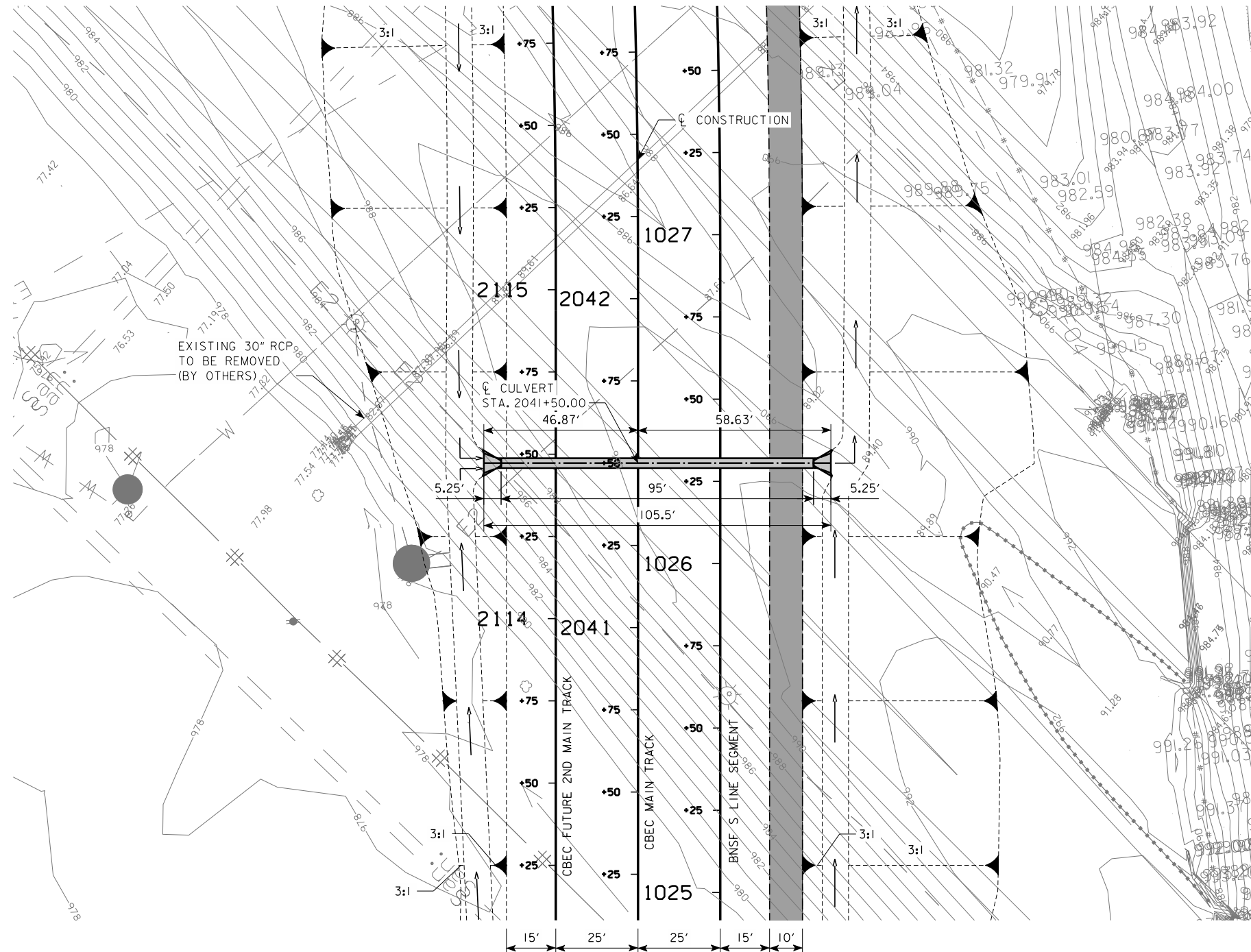
DESIGN FOR 0° SKEW
36 in. x 114 ft.
CORRUGATED METAL PIPE

PLAT PLAN
 STATION 2023+20.00 (ϕ CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY

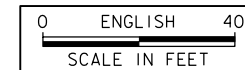
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG CL CULVERT



PLAT PLAN



LOCATION

CBEC MAIN TRACK
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 10.2 ACRES - FLAT

Q₅₀ = 18.1 CFS
HW ELEV. = 977.88

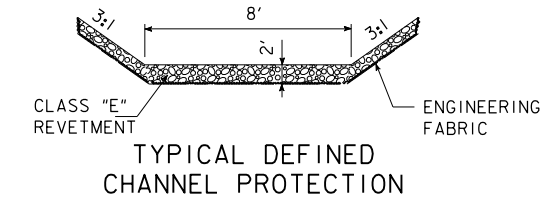
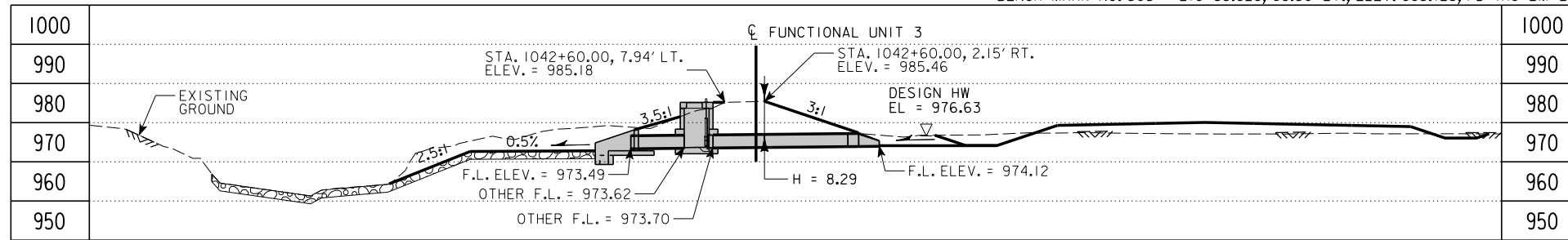
Q₁₀₀ = 21.7 CFS
HW ELEV. = 978.16

PRELIMINARY

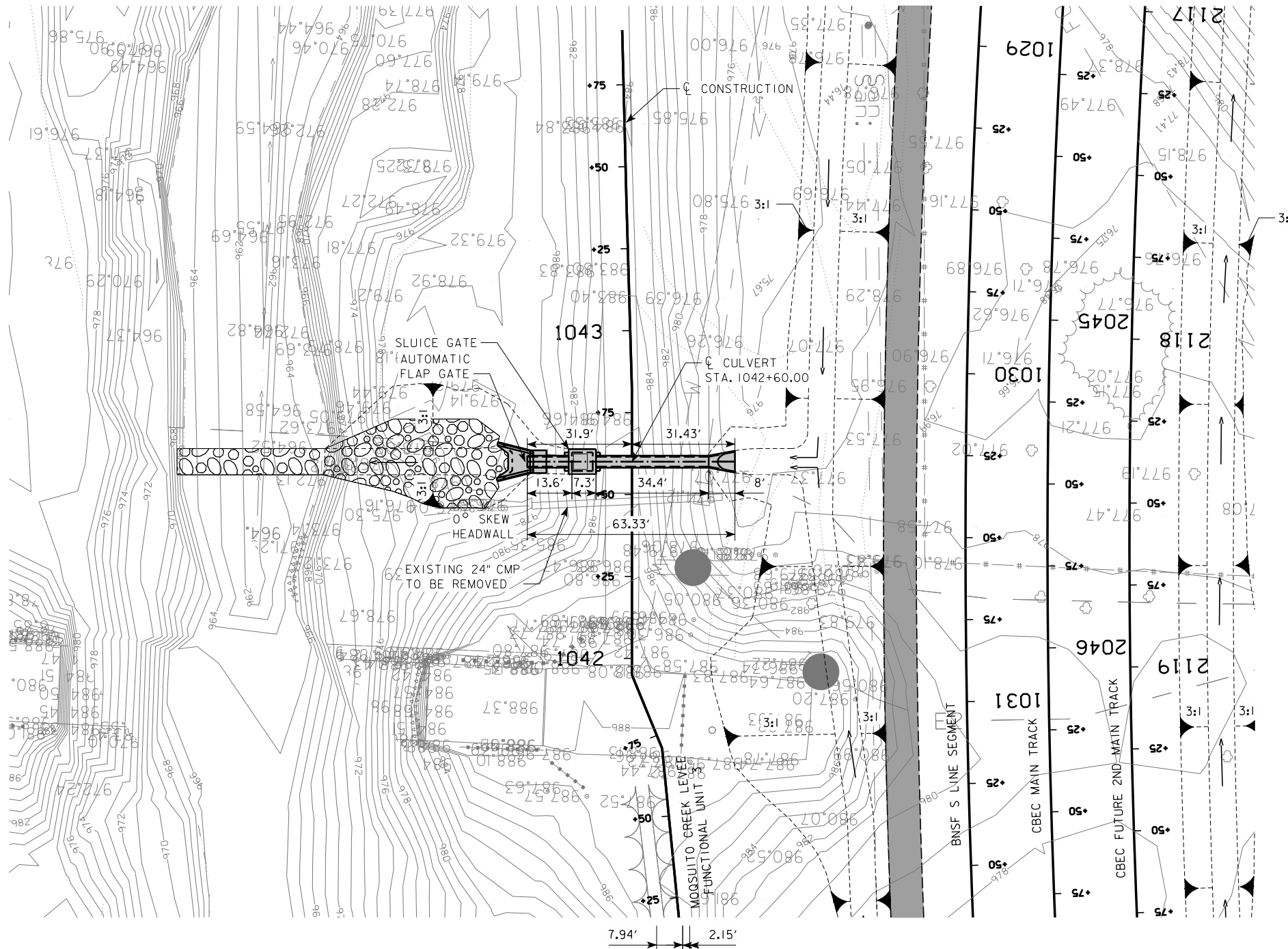
DESIGN FOR 0° SKEW
36 in. x 95 ft.
CORRUGATED METAL PIPE

PLAT PLAN
STATION 2041+50.00 (CL CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN

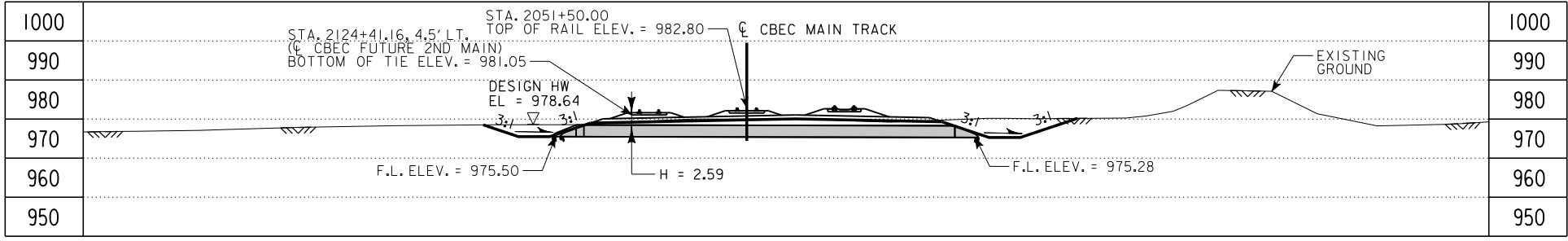
LOCATION

FUNCTIONAL UNIT 3
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

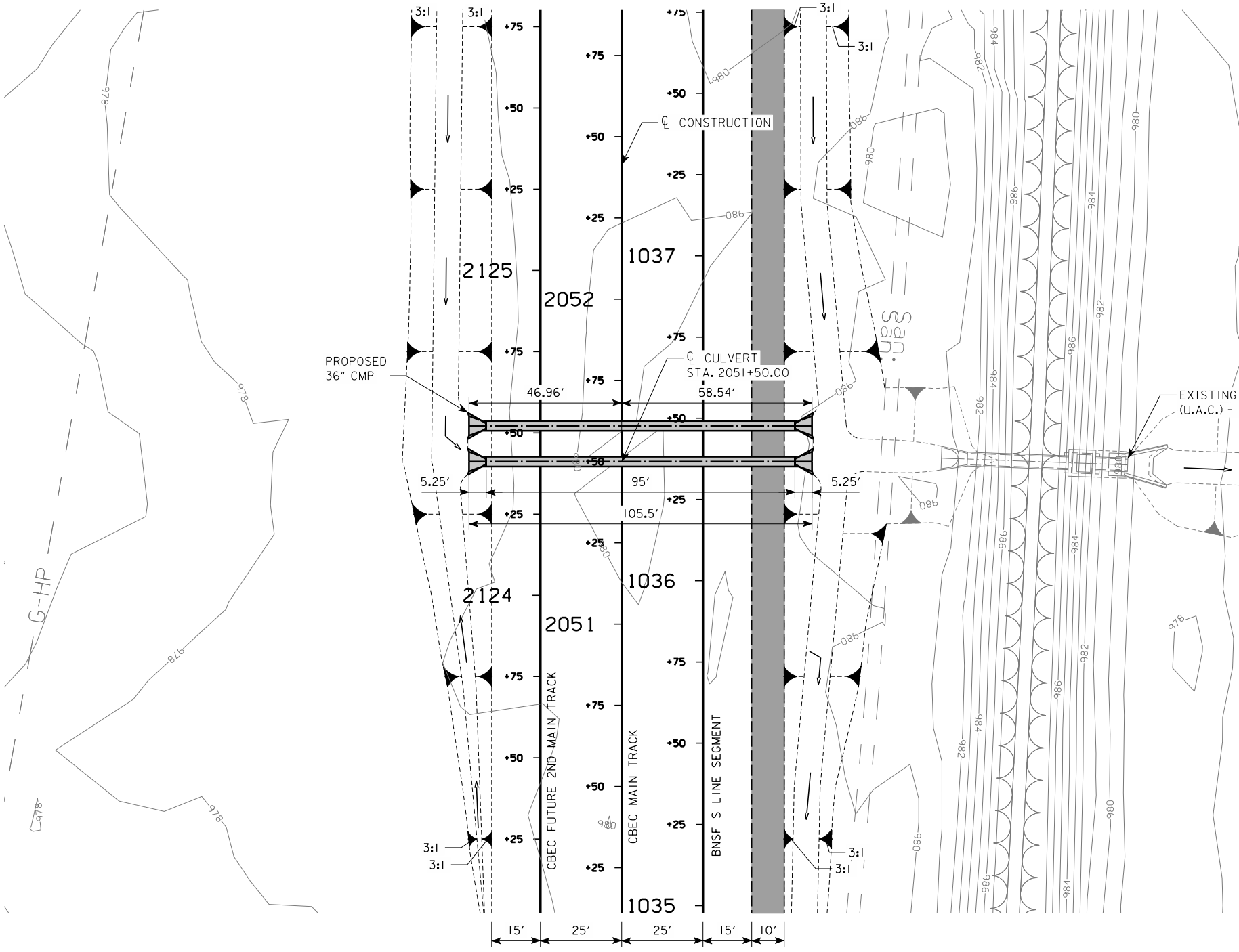
HYDRAULIC DATA

DRAINAGE AREA = 13.7 ACRES - FLAT
Q₅₀ = 22.5 CFS
HW ELEV. = 976.36
Q₁₀₀ = 27.0 CFS
HW ELEV. = 976.63

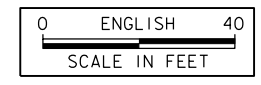
PRELIMINARY
DESIGN FOR 0° SKEW
36 in. X 48 ft.
REINFORCED CONCRETE PIPE
PLAT PLAN
STATION 1042+60.00 (\bar{C} FUNCTIONAL UNIT 3) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



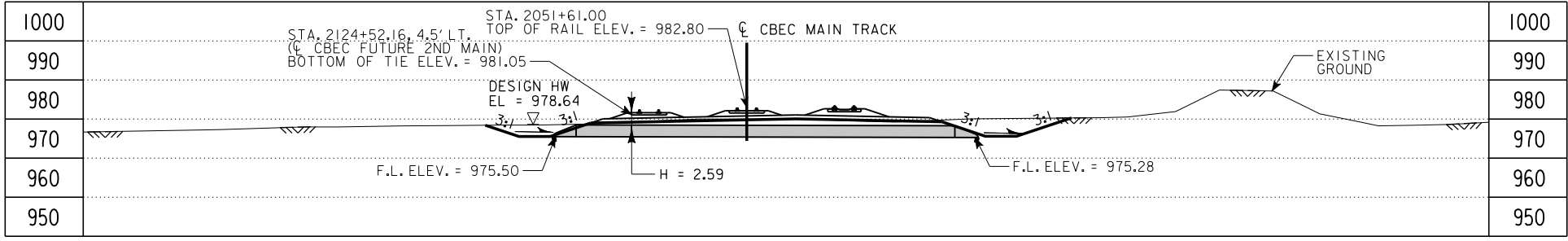
PLAT PLAN



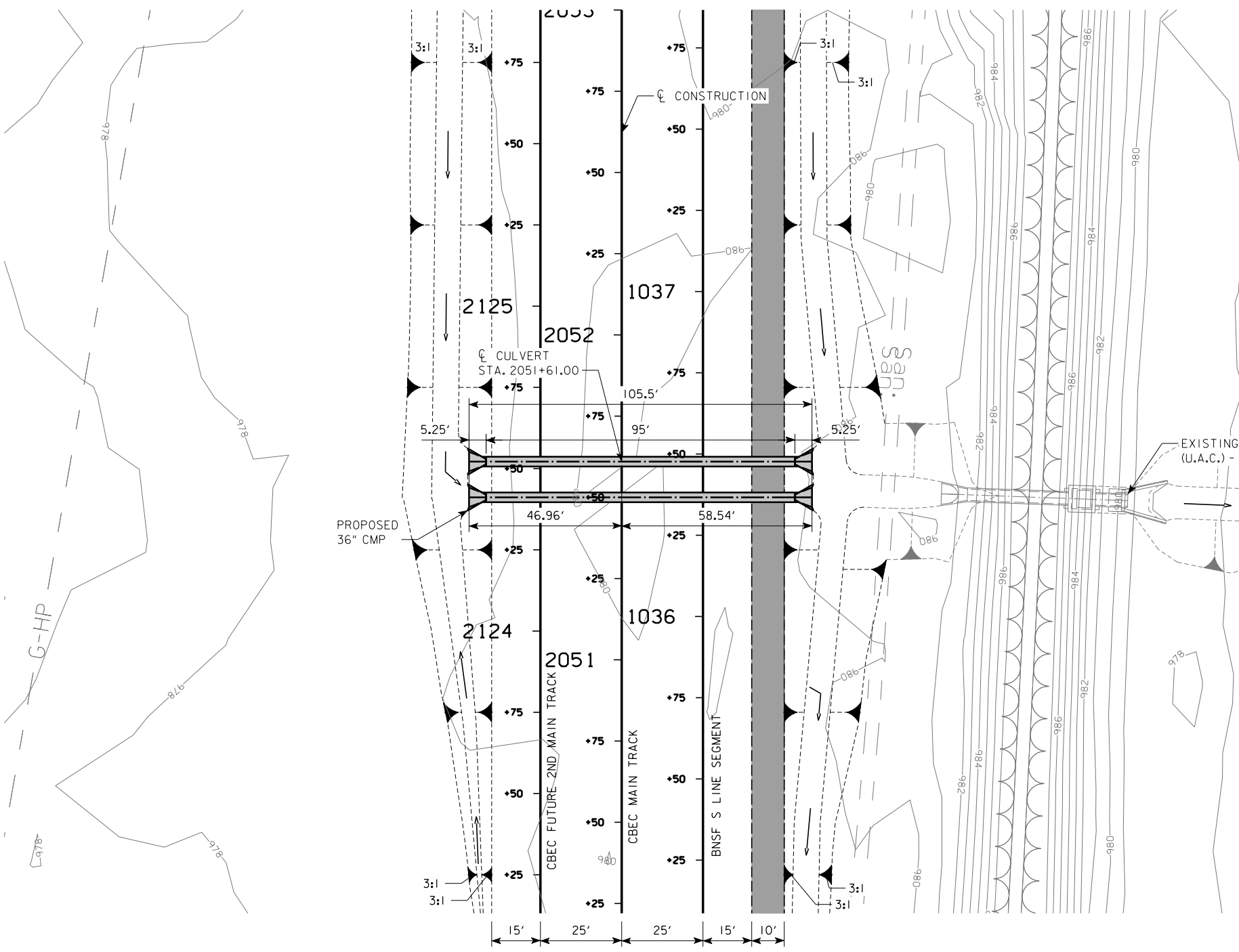
LOCATION
 CBEC MAIN TRACK
 T-74 N R-43 W
 SECTION 7
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA
 DRAINAGE AREA = 16.1 ACRES - ROLLING/FLAT
 Q₅₀ = 31.7 CFS
 HW ELEV. = 978.18
 Q₁₀₀ = 38.1 CFS
 HW ELEV. = 978.64

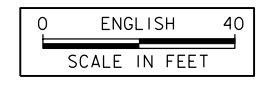
PRELIMINARY
 DESIGN FOR 0° SKEW
36 in. x 95 ft.
CORRUGATED METAL PIPE
PLAT PLAN
 STATION 2051+50.00 (\bar{C} CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG C CULVERT



PLAT PLAN



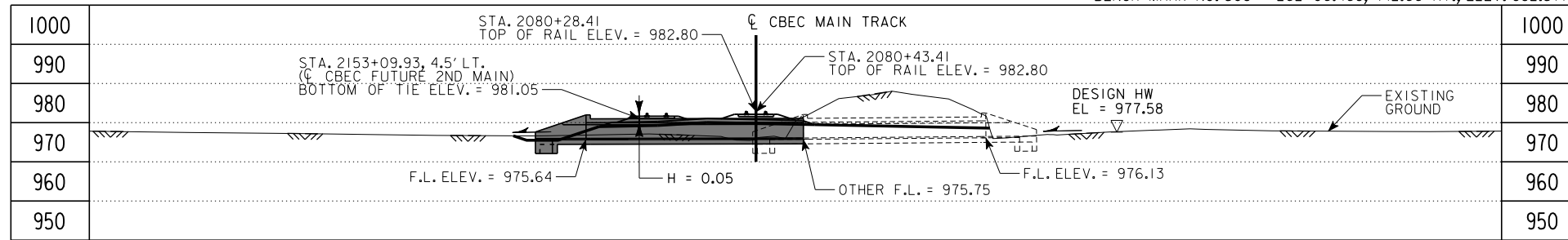
LOCATION

CBEC MAIN TRACK
 T-74 N R-43 W
 SECTION 7
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 16.1 ACRES - ROLLING/FLAT
 Q₅₀ = 31.7 CFS
 HW ELEV. = 978.18
 Q₁₀₀ = 38.1 CFS
 HW ELEV. = 978.64

PRELIMINARY
 DESIGN FOR 0° SKEW
36 in. x 95 ft.
CORRUGATED METAL PIPE
PLAT PLAN
 STATION 2051+61.00 (C CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



G = 0.000%

PI STA. = 2034+10.00
PI ELEV. = 982.80

PI STA. = 2085+76.19
PI ELEV. = 982.80

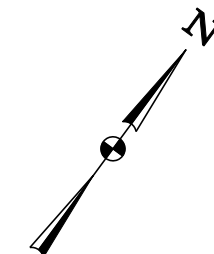
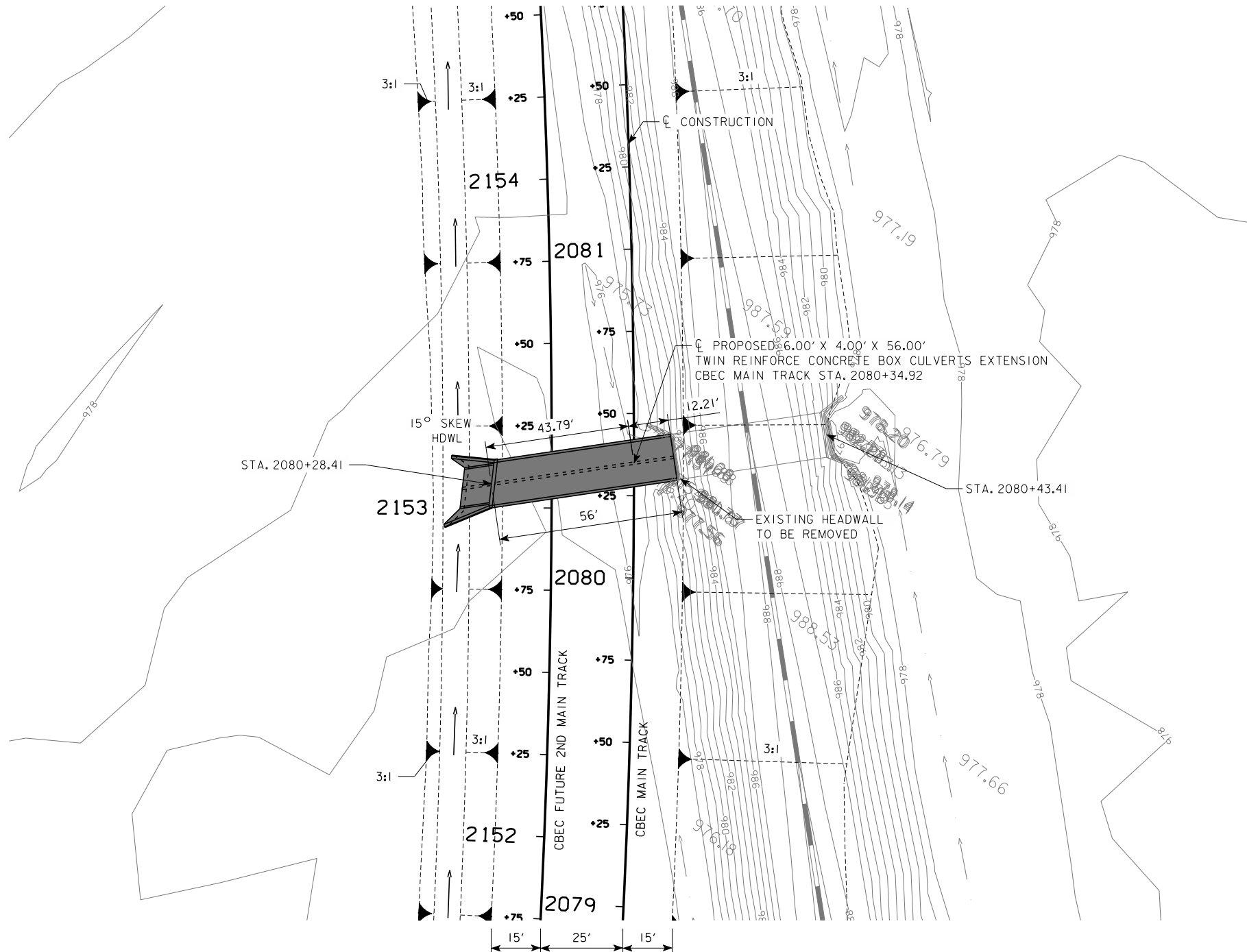
CL CBEC MAIN TRACK
PROPOSED GRADE

LONGITUDINAL SECTION AT CULVERT INVERTS

CBEC MAIN TRACK
ALIGNMENT INFORMATION

CURVE DATA

PI STA. 2076+46.41
 $\Delta = 39^\circ 53' 58.50''$ (LT)
 $D = 2^\circ 00' 00.00''$ (CHORD DEFINITION)
 $R = 2,864.93$
 $L = 1,954.98$
 $L_s = 40.00$
 TS STA. 2065+89.08
 SC STA. 2066+29.08
 CS STA. 2085+84.06
 ST STA. 2086+24.06



LOCATION

CBEC MAIN TRACK
 T-74 N R-43 W
 SECTION 7
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 15.5 ACRES - FLAT

$Q_{50} = 24.6$ CFS
 HW ELEV. = 977.40

$Q_{100} = 29.6$ CFS
 HW ELEV. = 977.58

PRELIMINARY

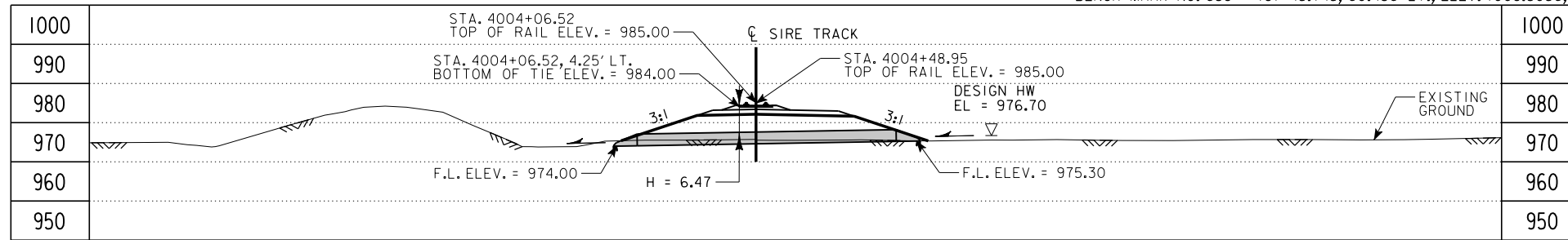
DESIGN FOR 0° SKEW

**6 ft. x 4 ft. Ext.
TWIN REINFORCED
CONCRETE BOX CULVERTS
SITUATION PLAN**

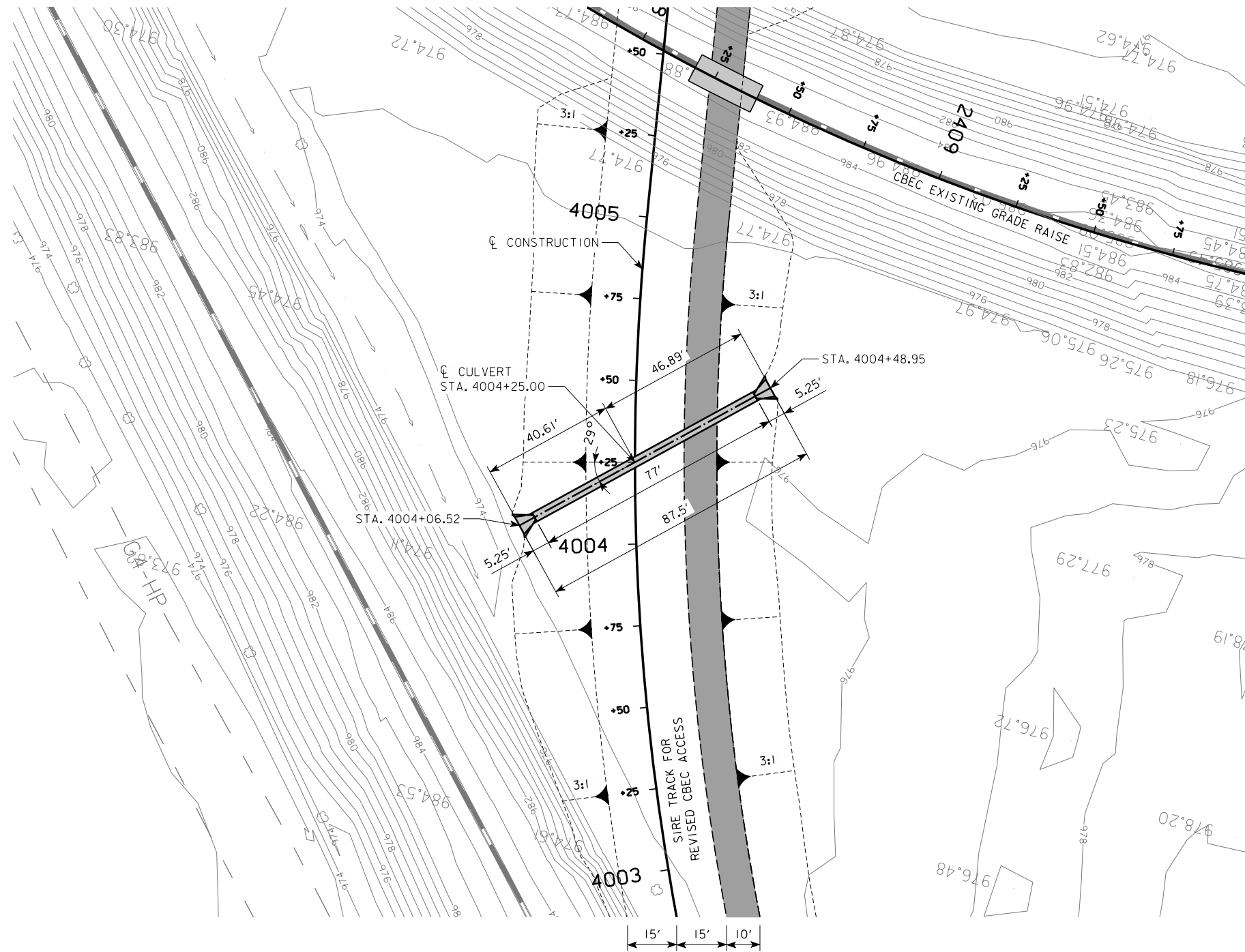
STATION 2080+34.92 (CL CBEC MAIN TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

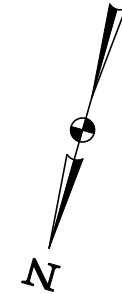
SITUATION PLAN



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN



LOCATION

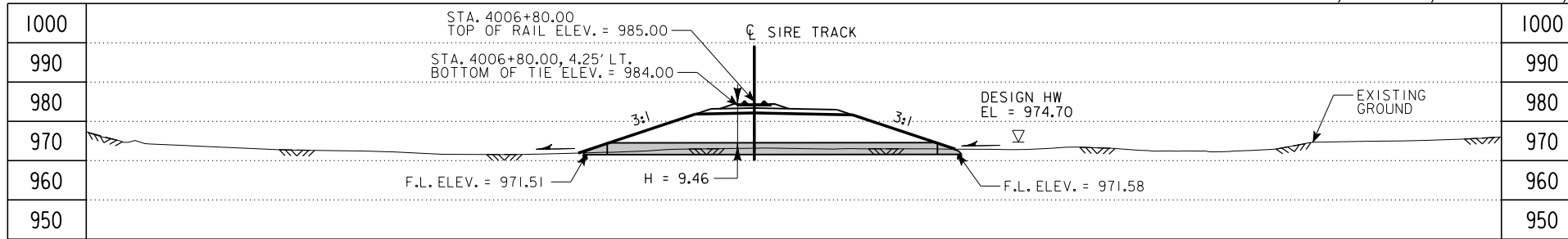
SIRE TRACK
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

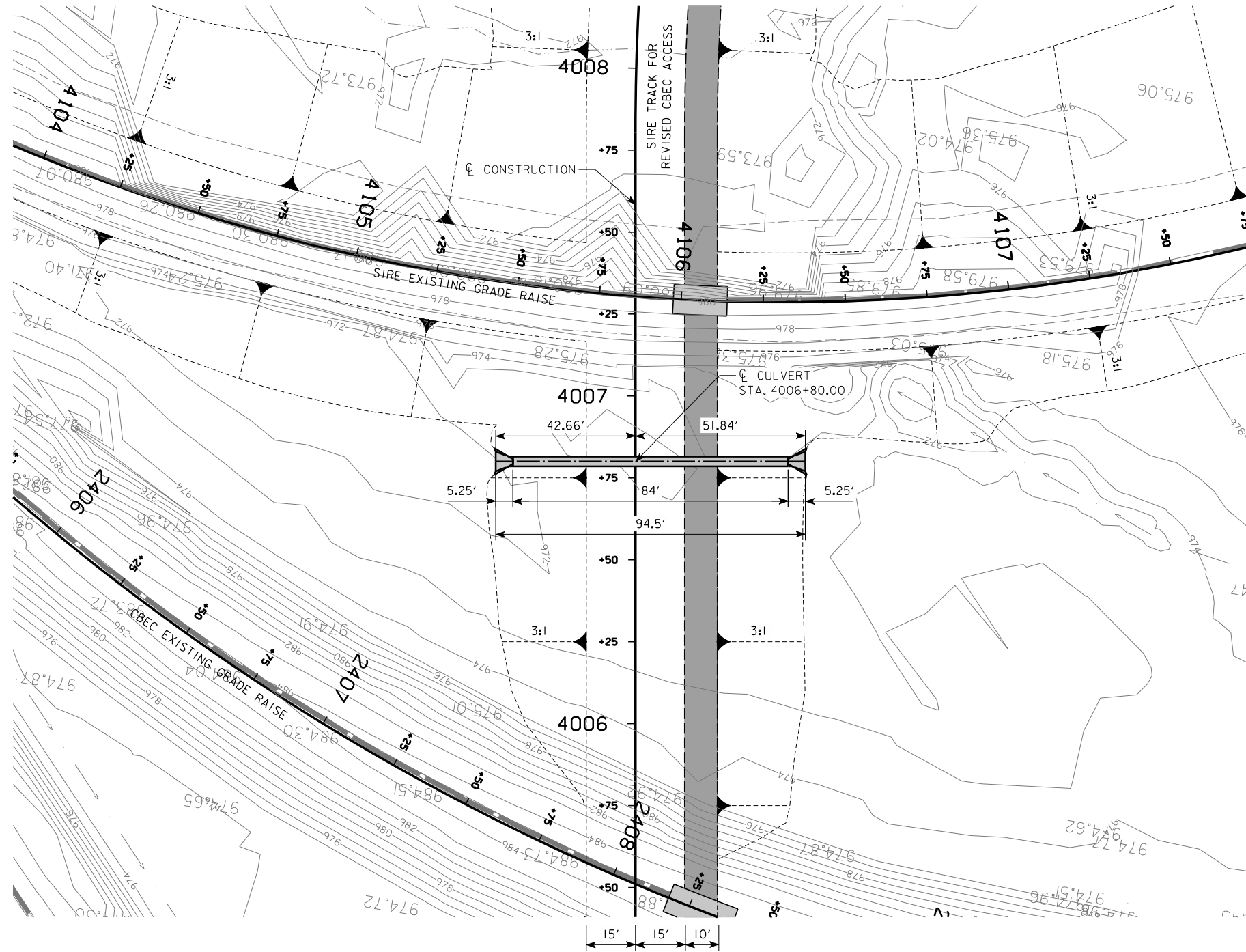
DRAINAGE AREA = 2.2 ACRES - ROLLING
 Q_{50} = 8.7 CFS
HW ELEV. = 976.40
 Q_{100} = 10.5 CFS
HW ELEV. = 976.70

PRELIMINARY

DESIGN FOR 29° SKEW, RT. AHEAD
36 in. x 77 ft.
CORRUGATED METAL PIPE
PLAT PLAN
STATION 4004+25.00 (\bar{C} SIRE TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN

LOCATION

SIRE TRACK
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

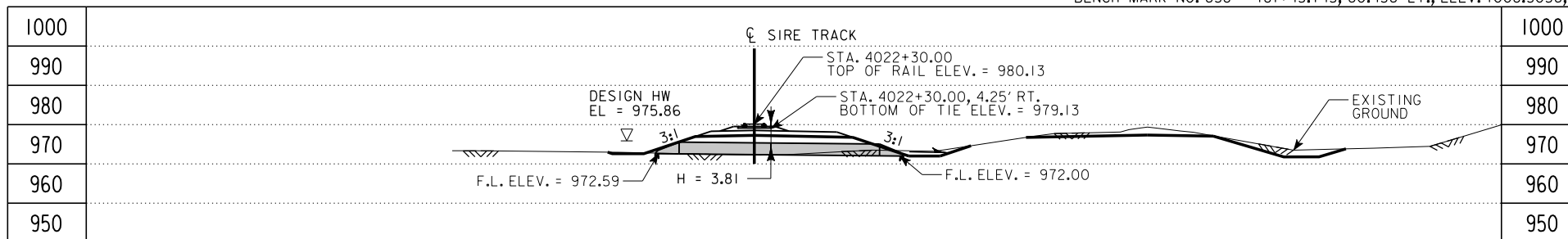
HYDRAULIC DATA

DRAINAGE AREA = 1.9 ACRES - ROLLING/HILLY
Q₅₀ = 9.1 CFS
HW ELEV. = 974.50
Q₁₀₀ = 10.9 CFS
HW ELEV. = 974.70

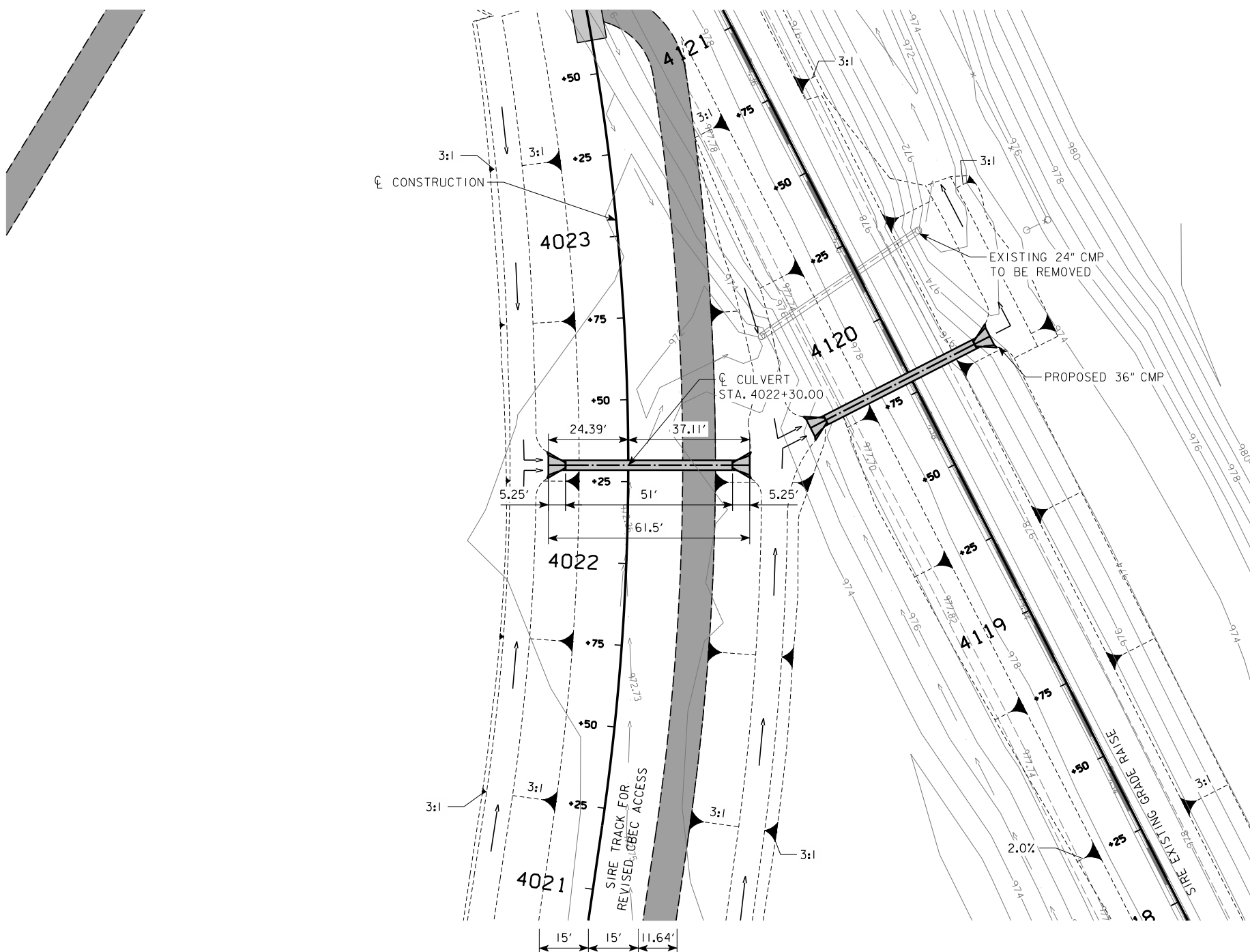
PRELIMINARY

DESIGN FOR 0° SKEW
36 in. x 84 ft.
CORRUGATED METAL PIPE

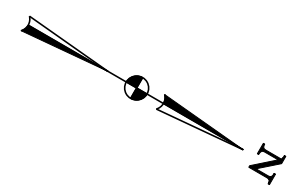
PLAT PLAN
STATION 4006+80.00 (\bar{C} SIRE TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG CL CULVERT



PLAT PLAN



LOCATION

SIRE TRACK
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

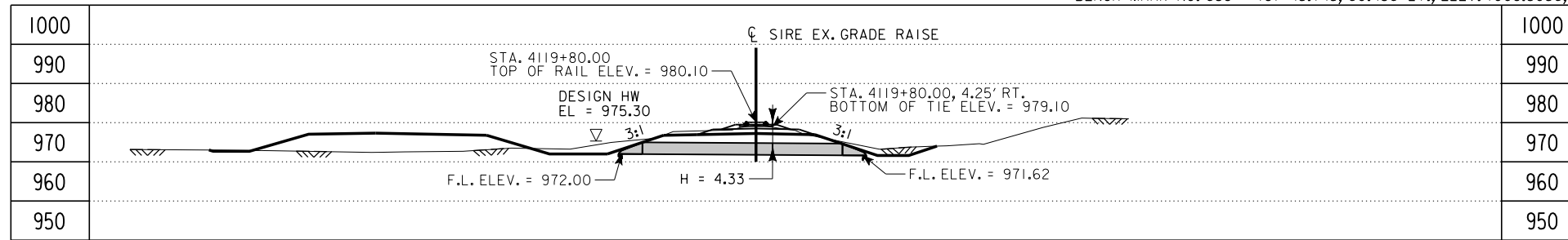
HYDRAULIC DATA

DRAINAGE AREA = 10.5 ACRES - FLAT

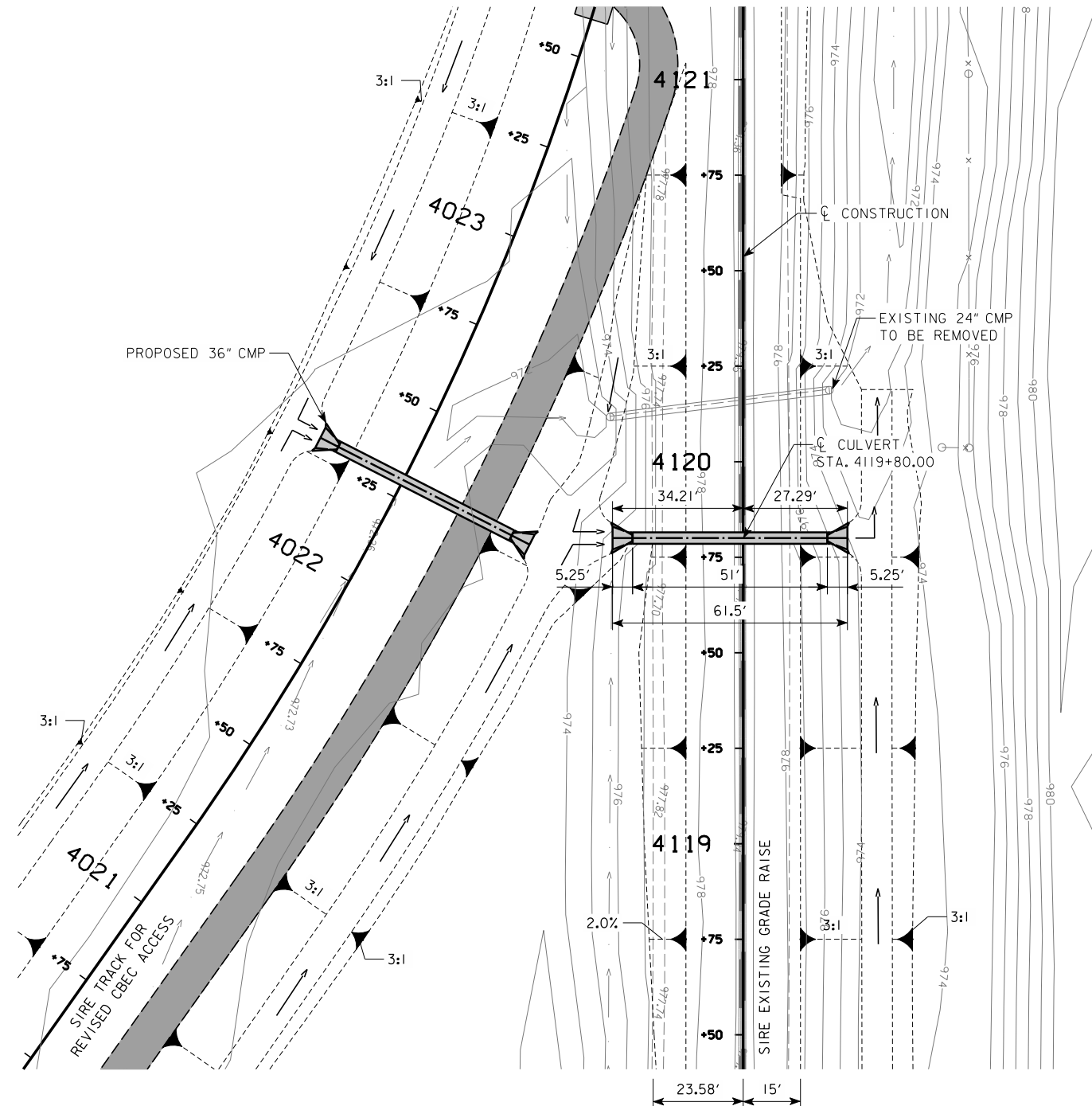
Q₅₀ = 18.4 CFS
HW ELEV. = 975.33

Q₁₀₀ = 22.1 CFS
HW ELEV. = 975.86

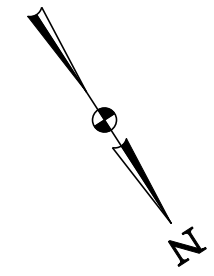
PRELIMINARY
DESIGN FOR 0° SKEW
36 in. x 51 ft.
CORRUGATED METAL PIPE
PLAT PLAN
STATION 4022+30.00 (CL SIRE TRACK) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN



LOCATION

SIRE EX. GRADE RAISE
 T-74 N R-43 W
 SECTION 18
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

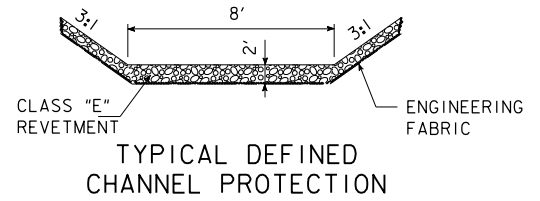
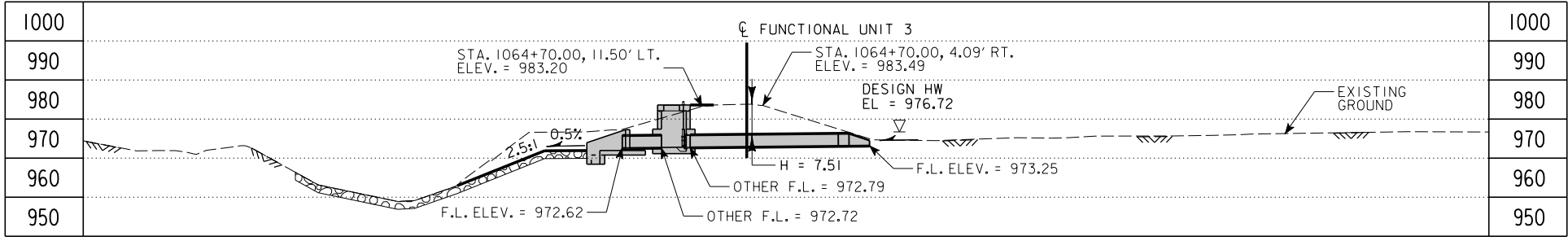
HYDRAULIC DATA

DRAINAGE AREA = 18.2 ACRES - FLAT
 Q_{50} = 27.7 CFS
 HW ELEV. = 974.93
 Q_{100} = 33.2 CFS
 HW ELEV. = 975.30

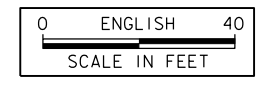
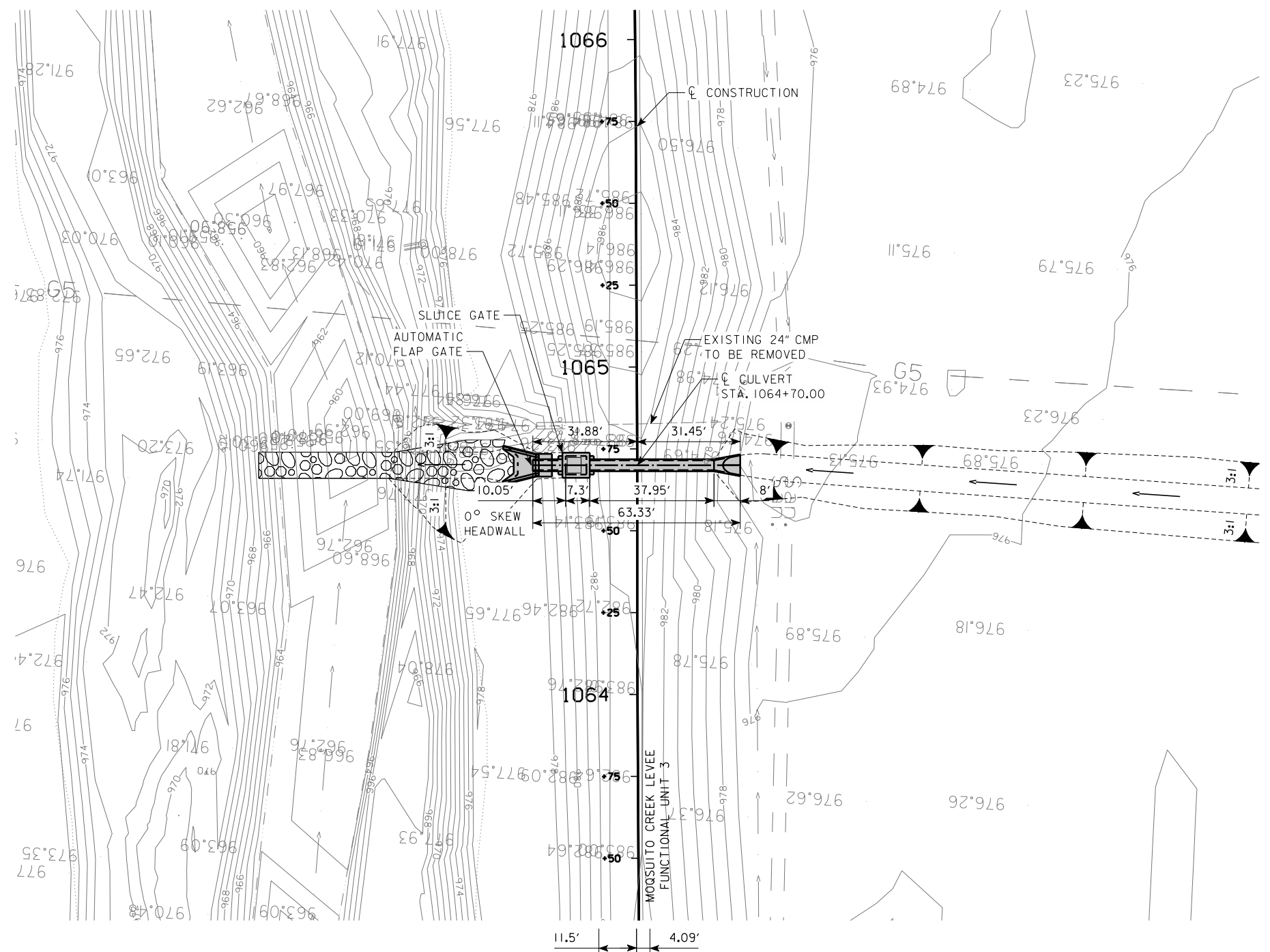
PRELIMINARY

DESIGN FOR 0° SKEW
36 in. x 51 ft.
SMOOTH STEEL PIPE

PLAT PLAN
 STATION 4119+80.00 (\bar{C} SIRE EX. GRADE RAISE) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



LOCATION

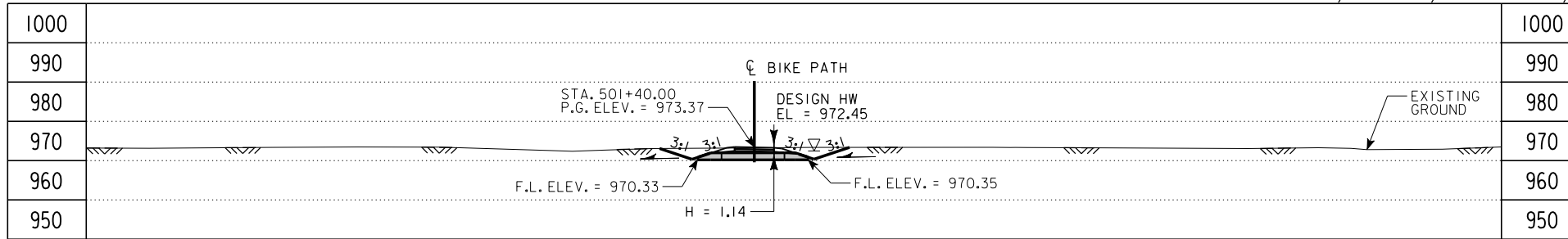
FUNCTIONAL UNIT 3
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

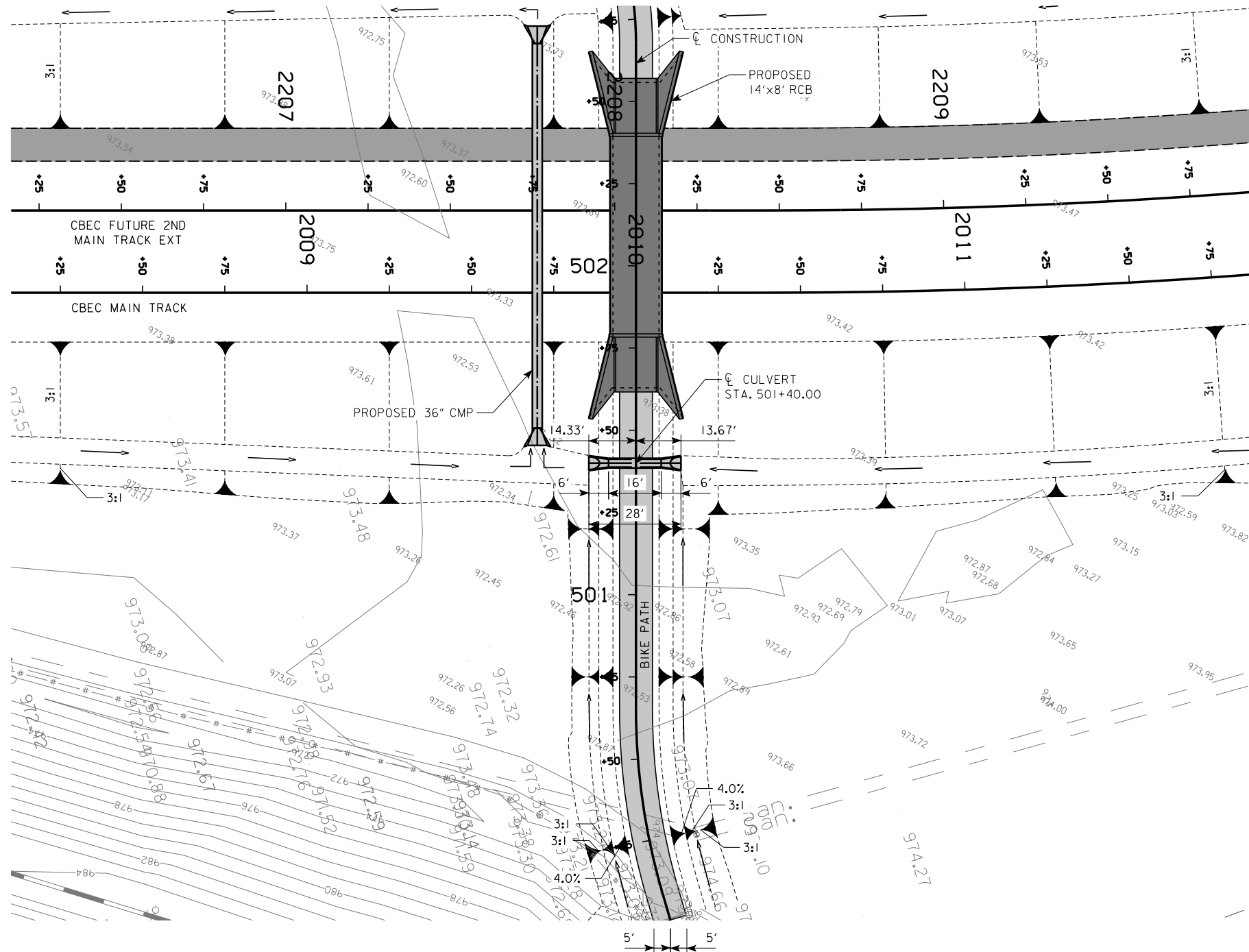
DRAINAGE AREA = 25.6 ACRES - FLAT
Q₅₀ = 35.7 CFS
HW ELEV. = 976.27
Q₁₀₀ = 42.8 CFS
HW ELEV. = 976.72

PRELIMINARY
DESIGN FOR 0° SKEW
36 in. X 48 ft.
REINFORCED CONCRETE PIPE
PLAT PLAN
STATION 1064+70.00 (\bar{C} FUNCTIONAL UNIT 3) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

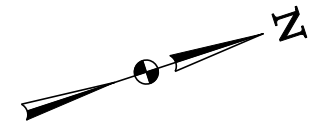
PLAT PLAN



LONGITUDINAL SECTION ALONG CL CULVERT



PLAT PLAN



LOCATION

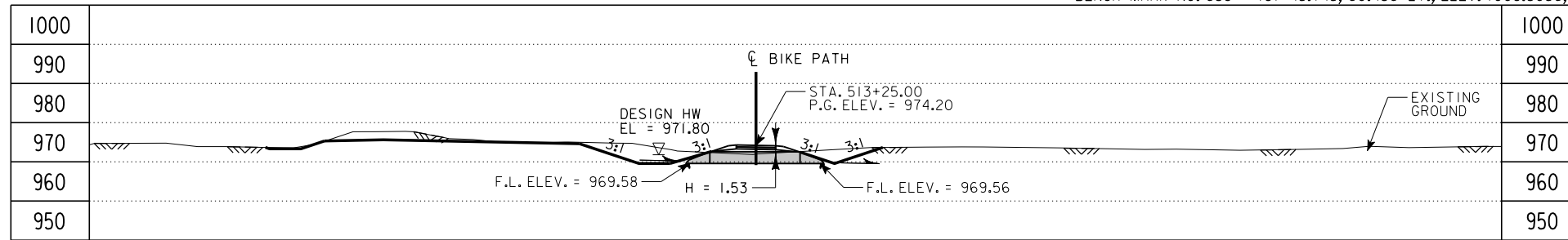
BIKE PATH
 T-74 N R-43 W
 SECTION 18
 LEWIS TOWNSHIP
 POTTAWATTAMIE COUNTY

HYDRAULIC DATA

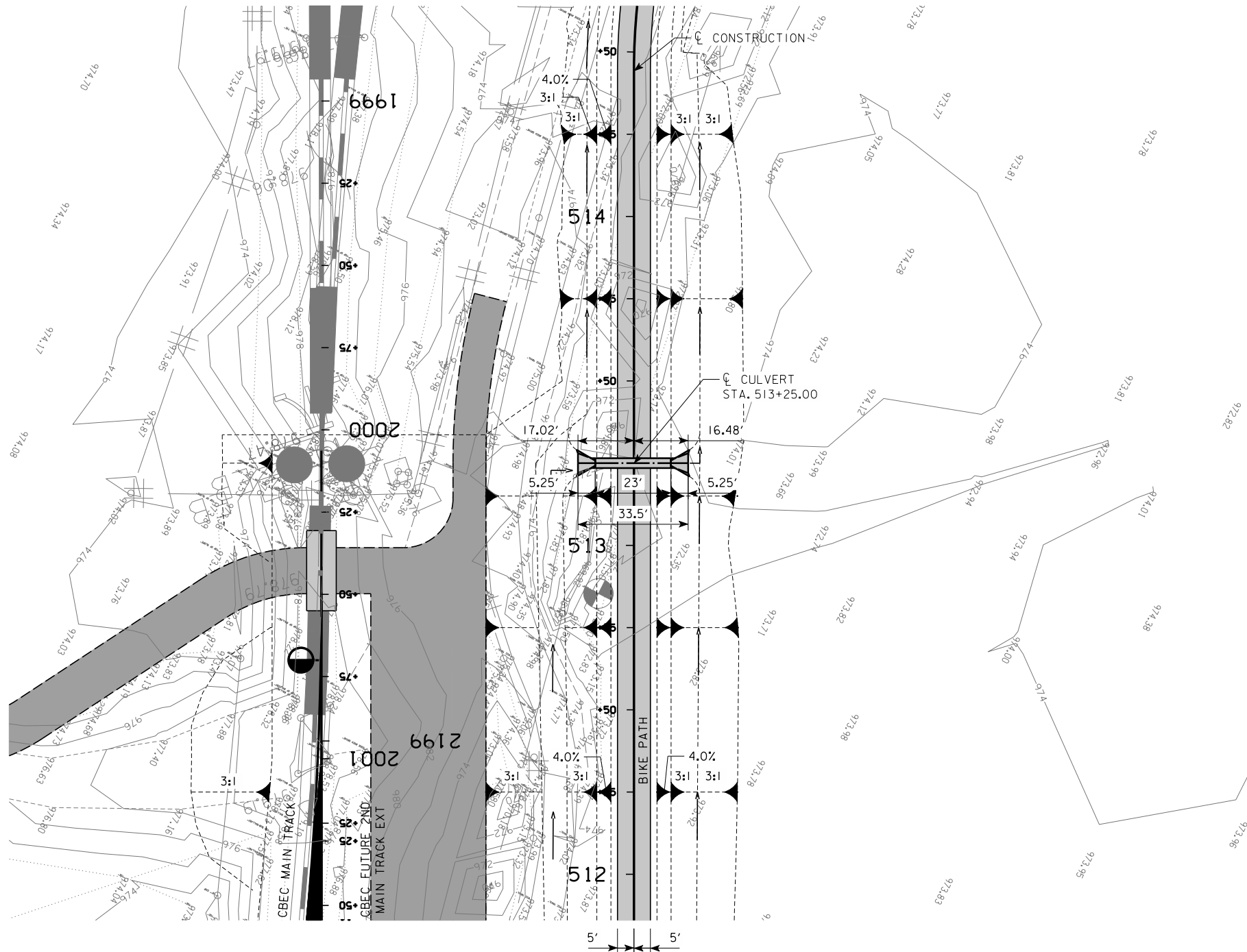
DRAINAGE AREA = 5.7 ACRES - FLAT
 $Q_{10} = 8.3$ CFS
 HW ELEV. = 972.45
 $Q_{100} = 14.2$ CFS
 HW ELEV. = 973.38

PRELIMINARY

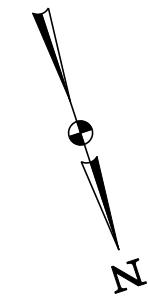
DESIGN FOR 0° SKEW
**29 in. x 18 in. x 16 ft.
 REINFORCED CONCRETE ARCH PIPE**
PLAT PLAN
 STATION 501+40.00 (CL BIKE PATH) JANUARY 2011
POTTAWATTAMIE COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



LONGITUDINAL SECTION ALONG \bar{C} CULVERT



PLAT PLAN



LOCATION

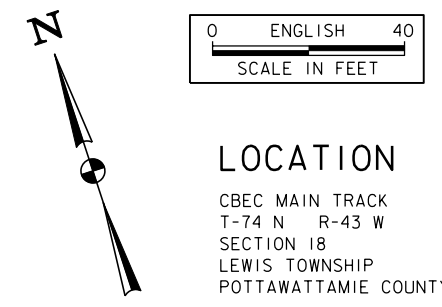
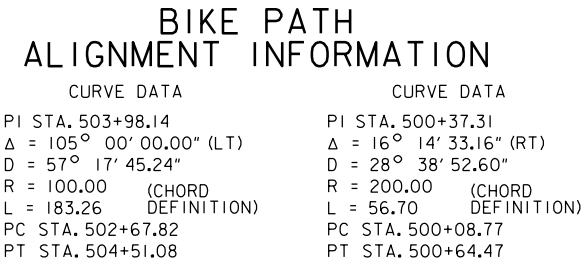
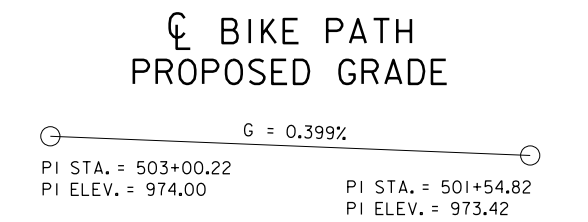
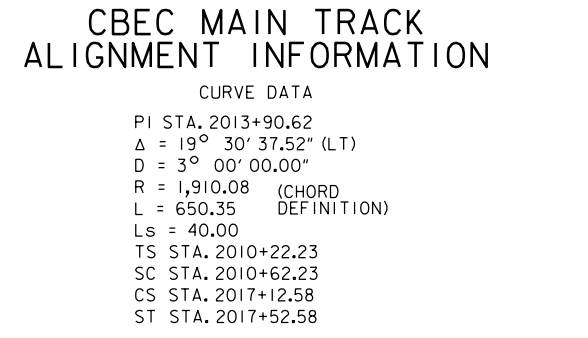
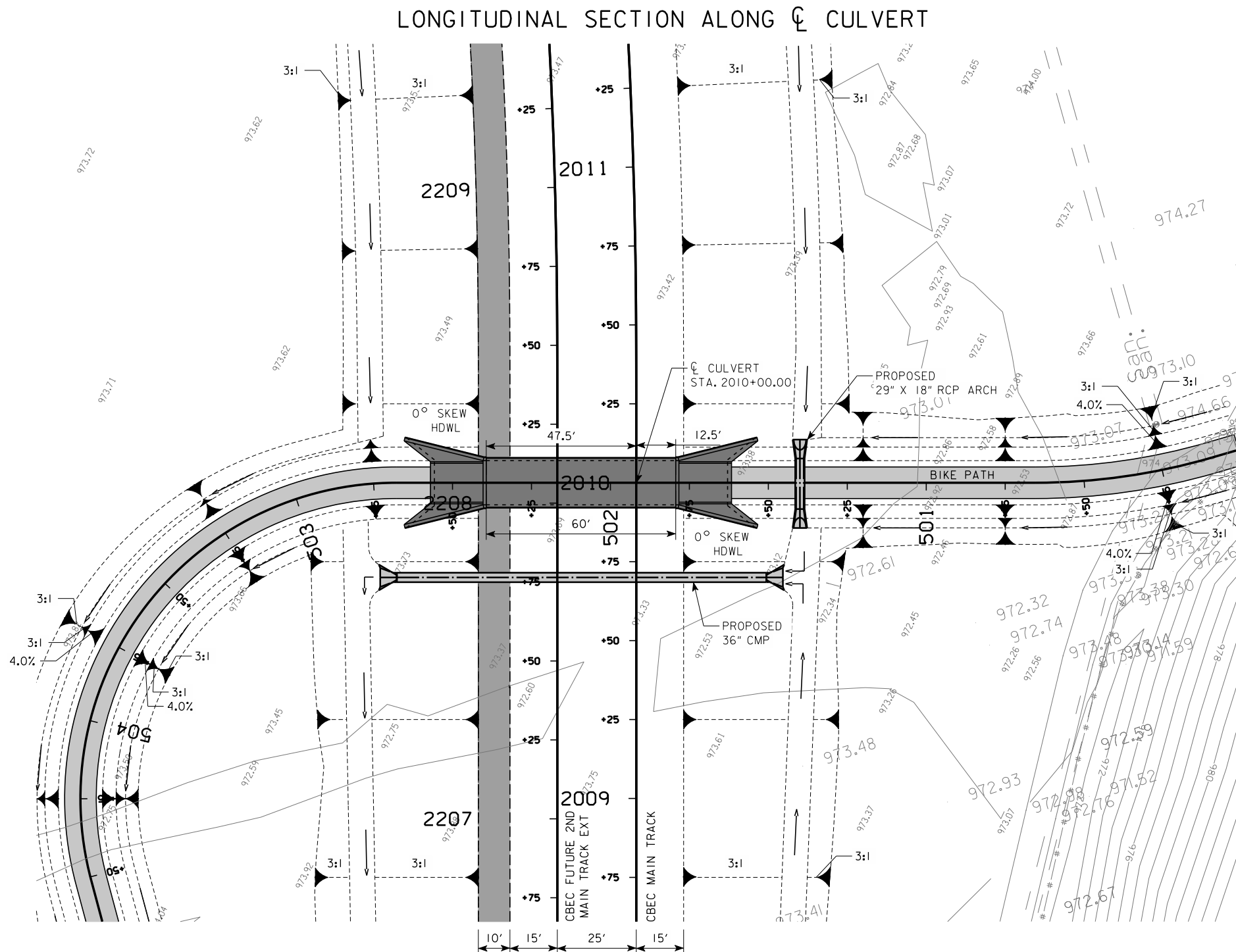
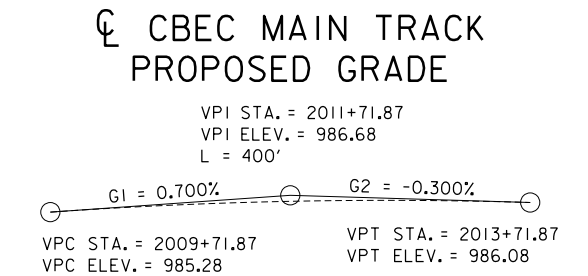
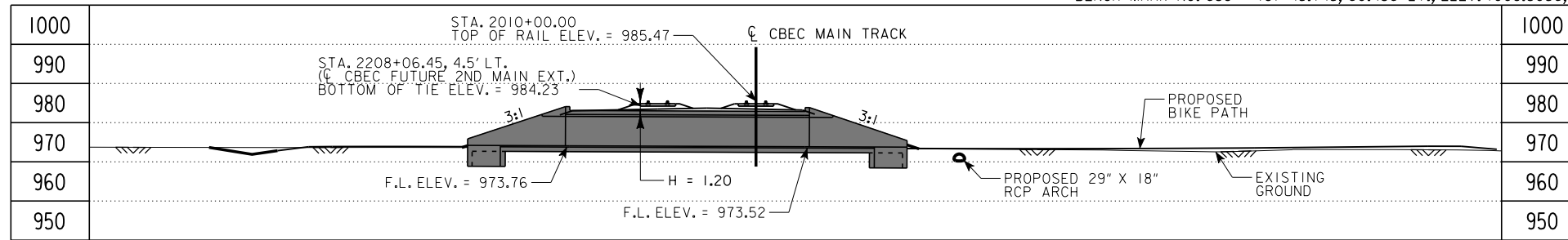
BIKE PATH
T-74 N R-43 W
SECTION 18
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY

HYDRAULIC DATA

DRAINAGE AREA = 10.8 ACRES - FLAT
 $Q_{10} = 13.2$ CFS
HW ELEV. = 971.80
 $Q_{100} = 22.6$ CFS
HW ELEV. = 972.48

PRELIMINARY

DESIGN FOR 0° SKEW
36 in. X 23 ft.
CORRUGATED METAL PIPE
PLAT PLAN
STATION 513+25.00 (\bar{C} BIKE PATH) JANUARY 2011
POTTAWATTAMIE COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____



PRELIMINARY

DESIGN FOR 0° SKEW

14 ft. x 8 ft. x 60 ft.

REINFORCED CONCRETE

BOX CULVERT

SITUATION PLAN

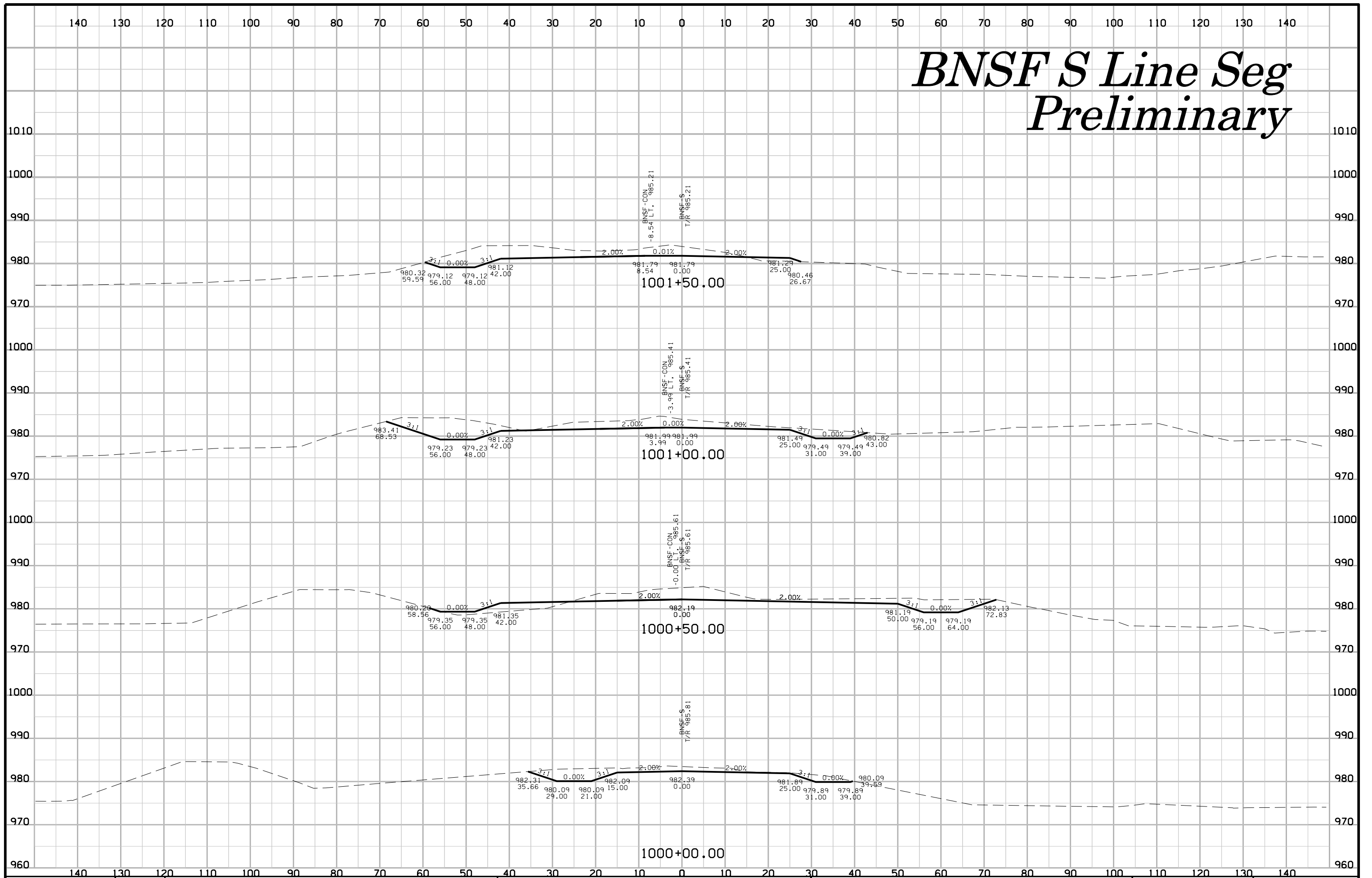
STATION 2010+00.00 (CULVERT CENTERLINE) JANUARY 2011

POTTAWATTAMIE COUNTY

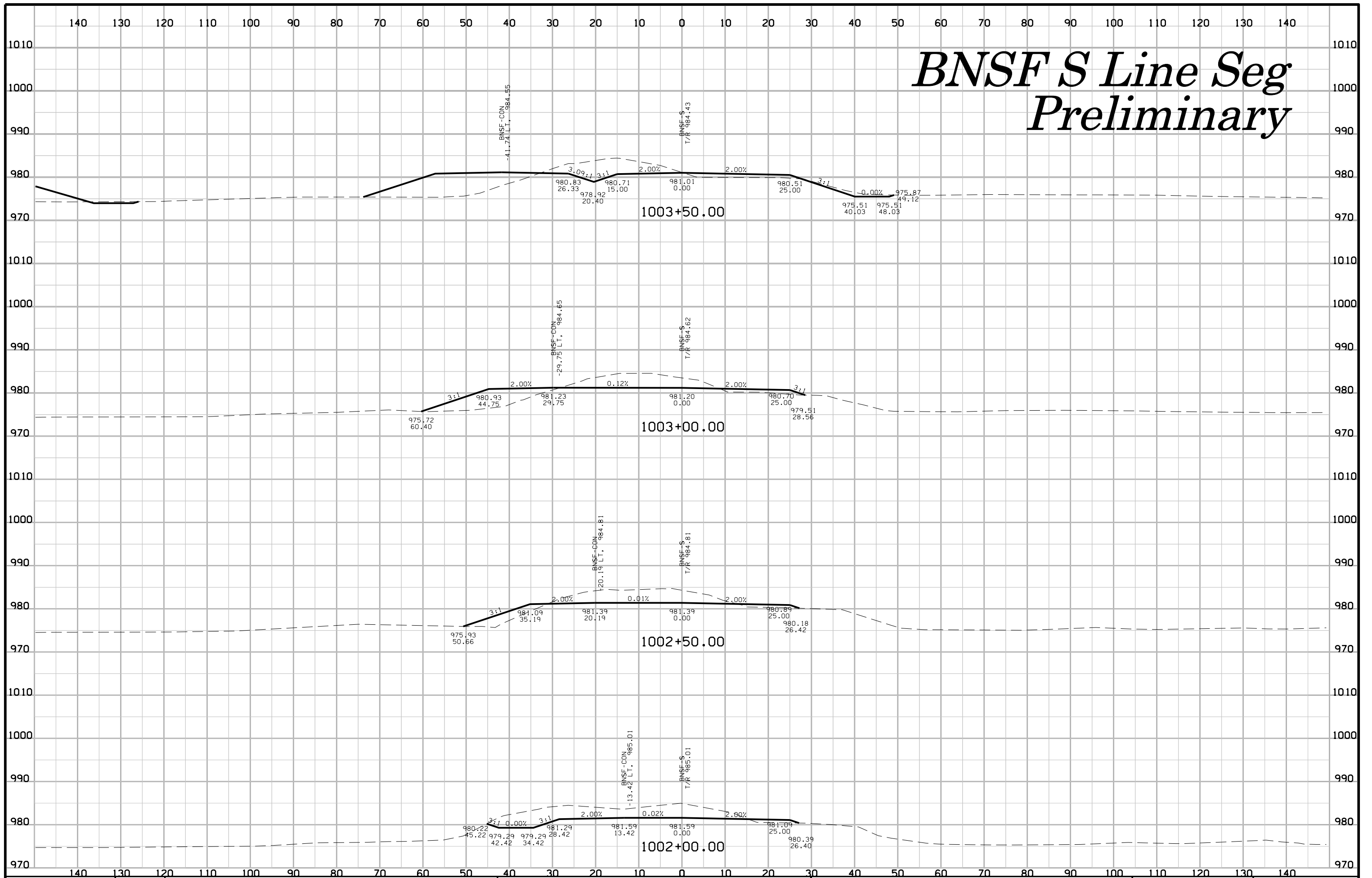
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

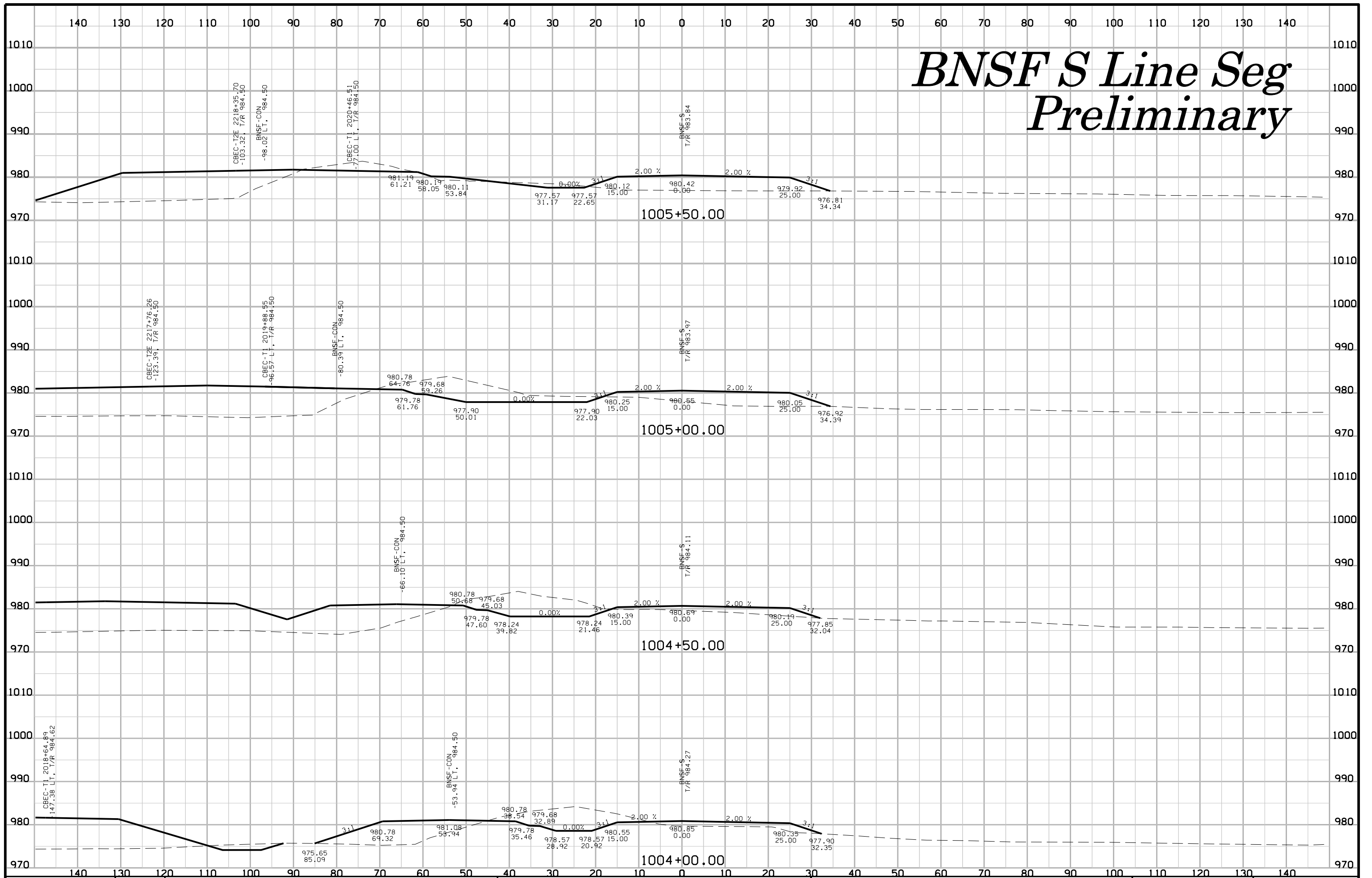
BNSF S Line Seg Preliminary



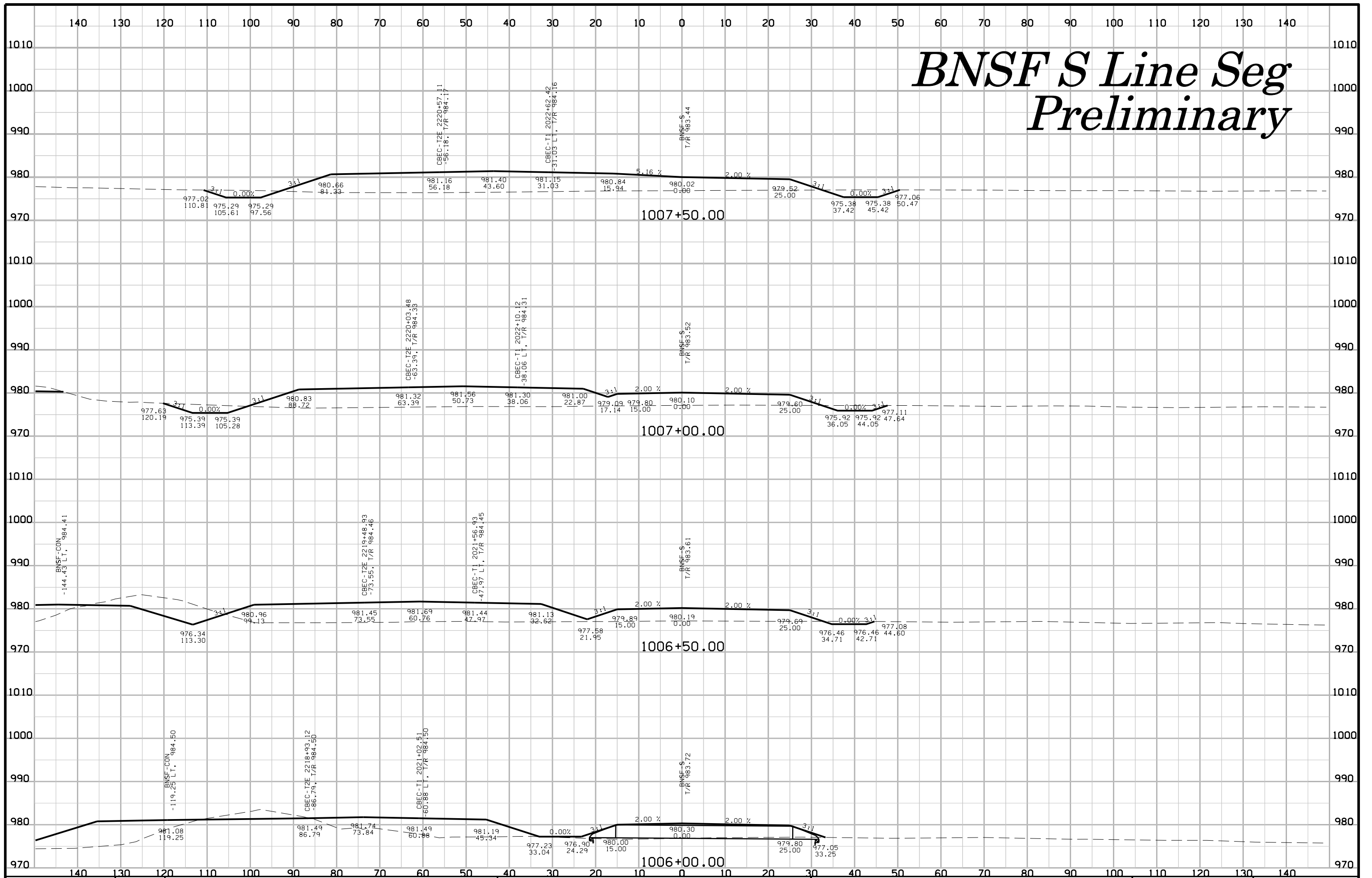
BNSF S Line Seg Preliminary



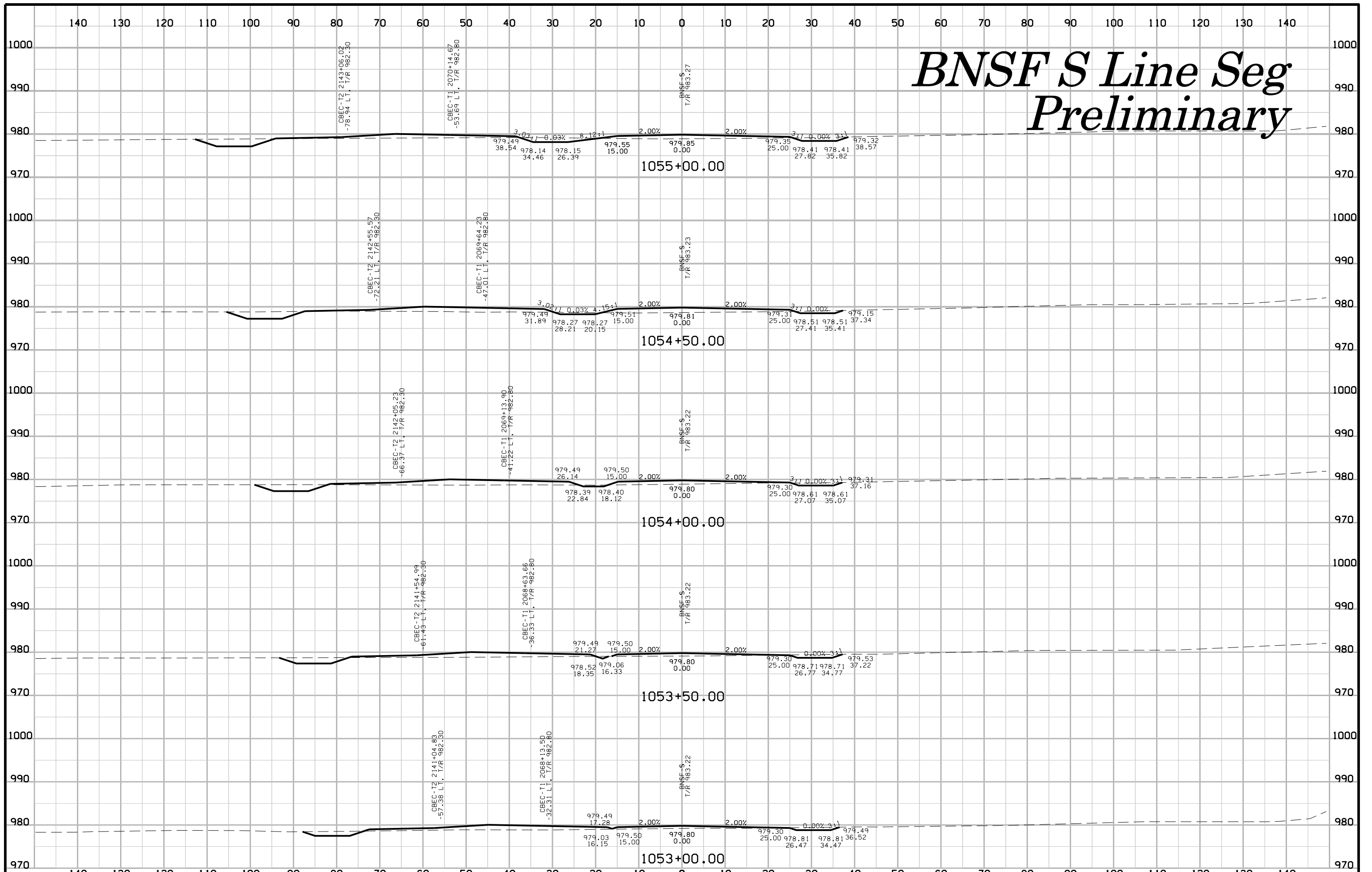
BNSF S Line Seg Preliminary



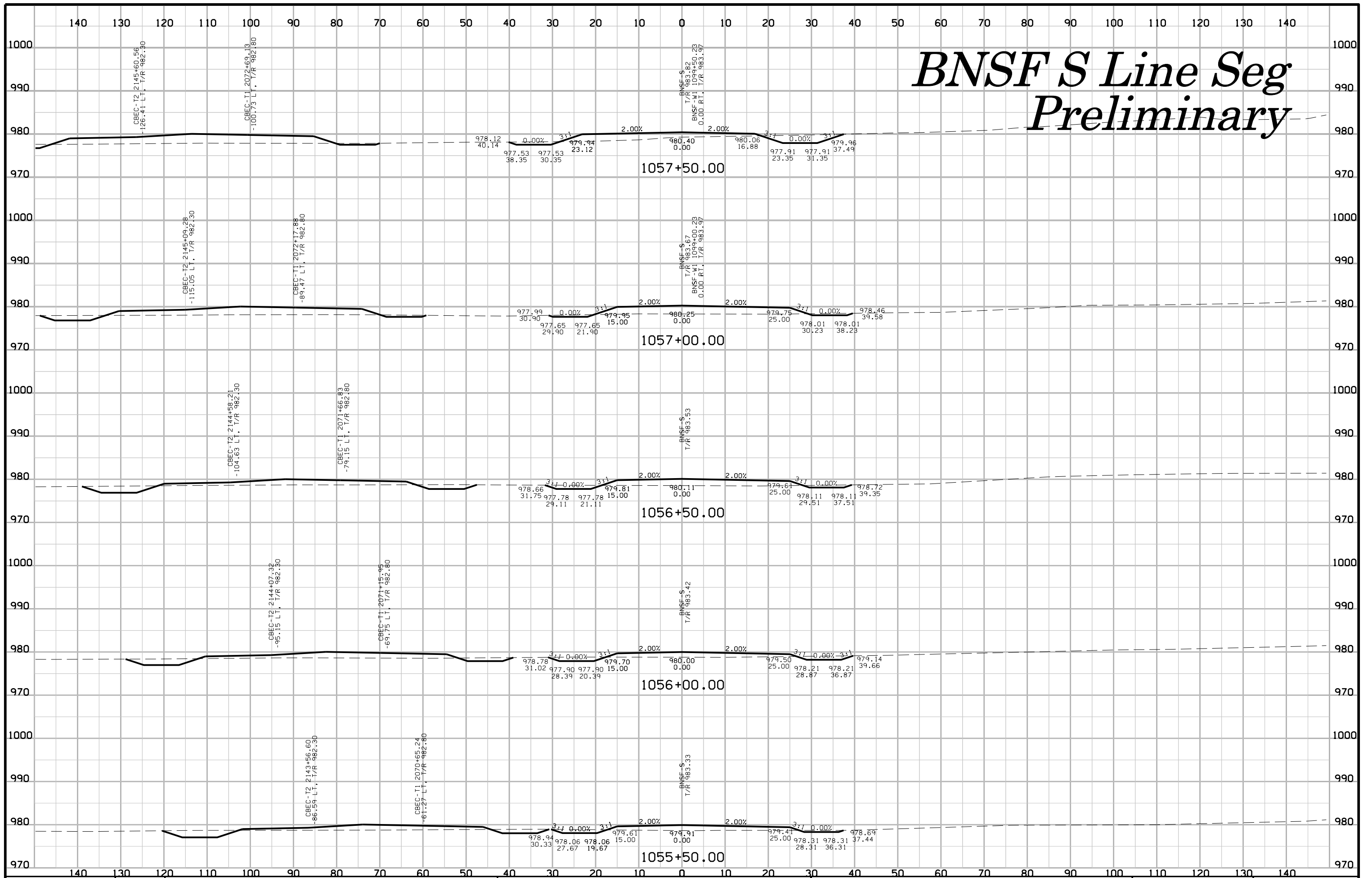
BNSF S Line Seg Preliminary



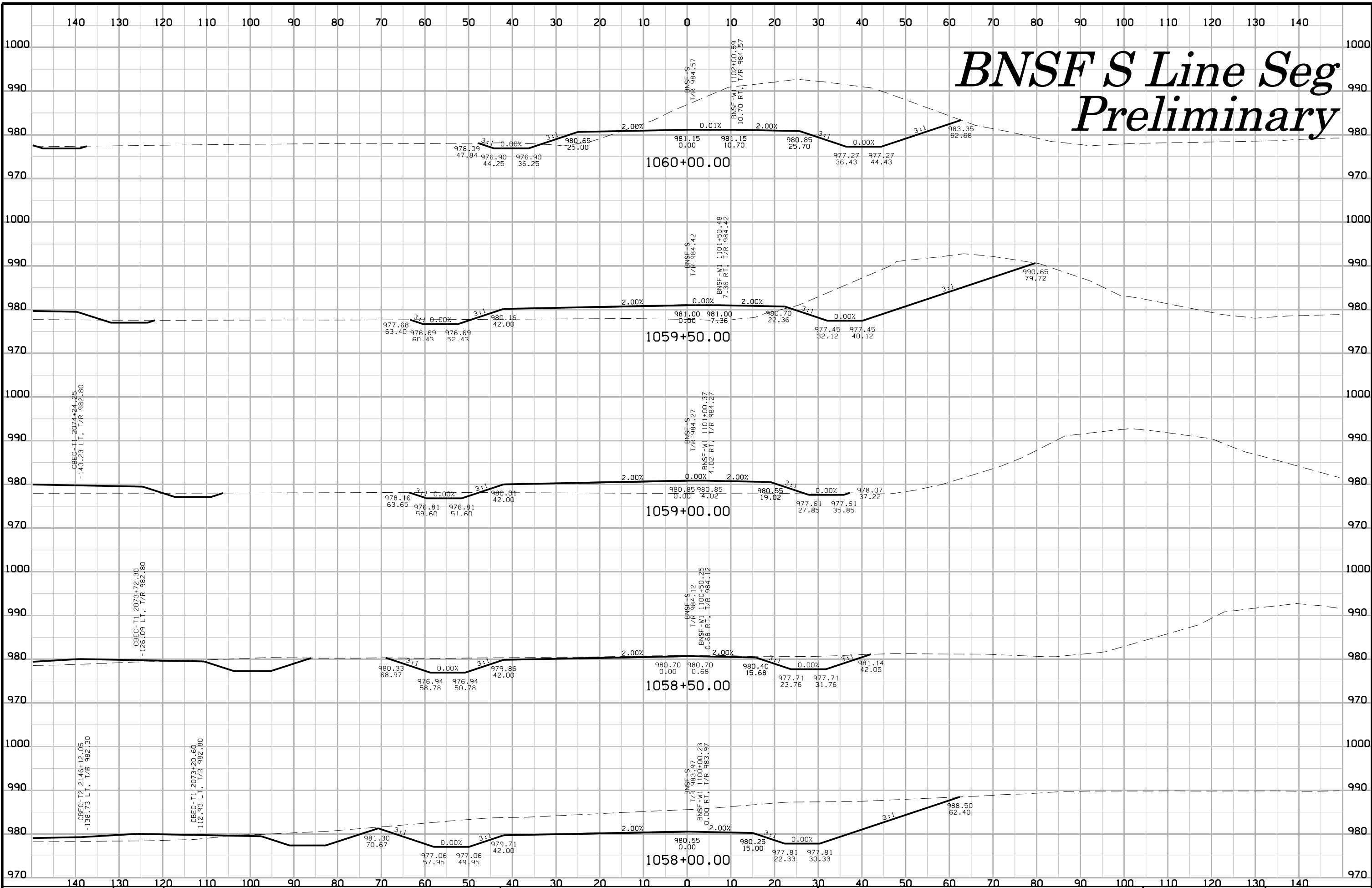
BNSF S Line Seg Preliminary



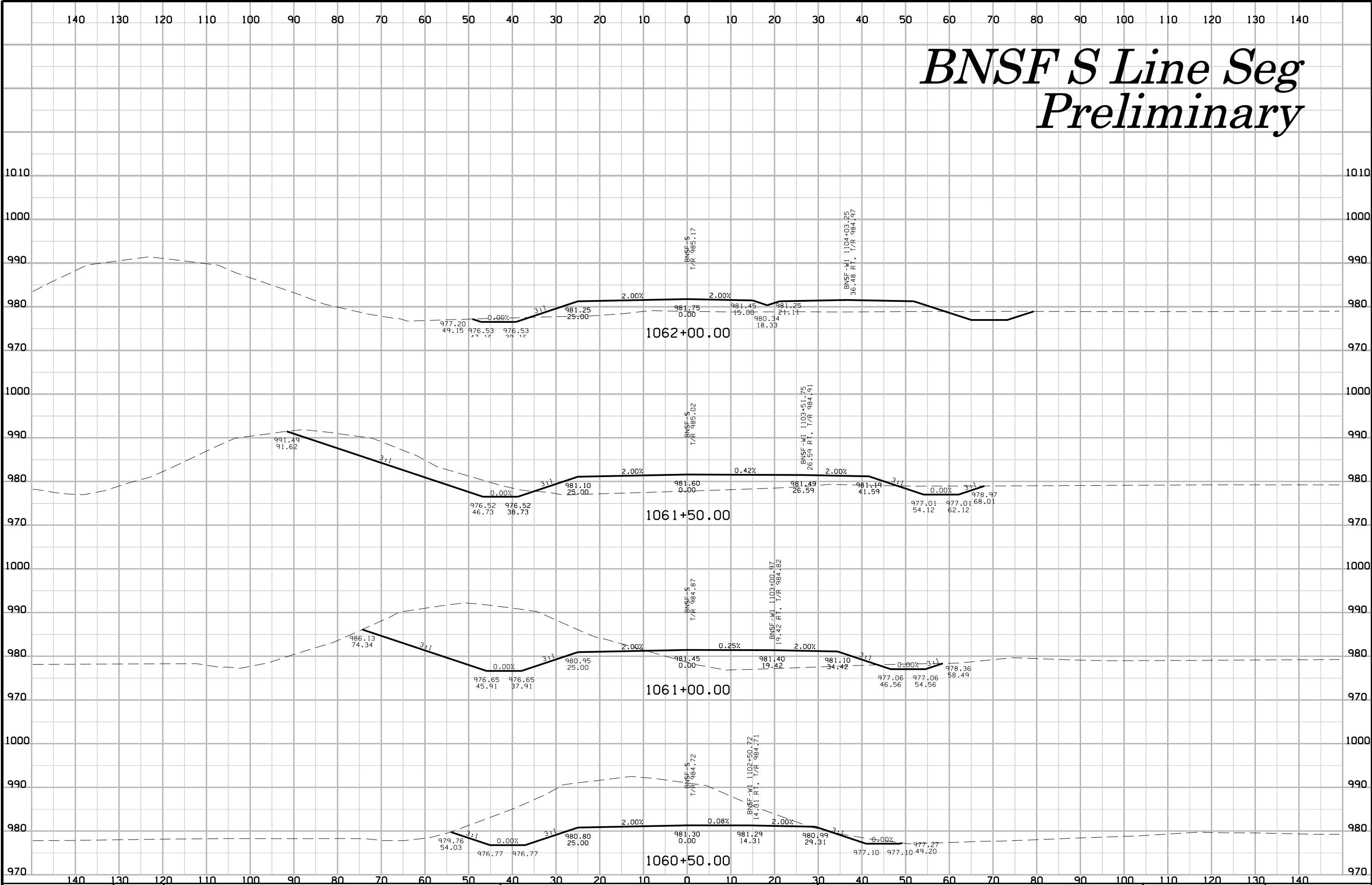
BNSF S Line Seg Preliminary



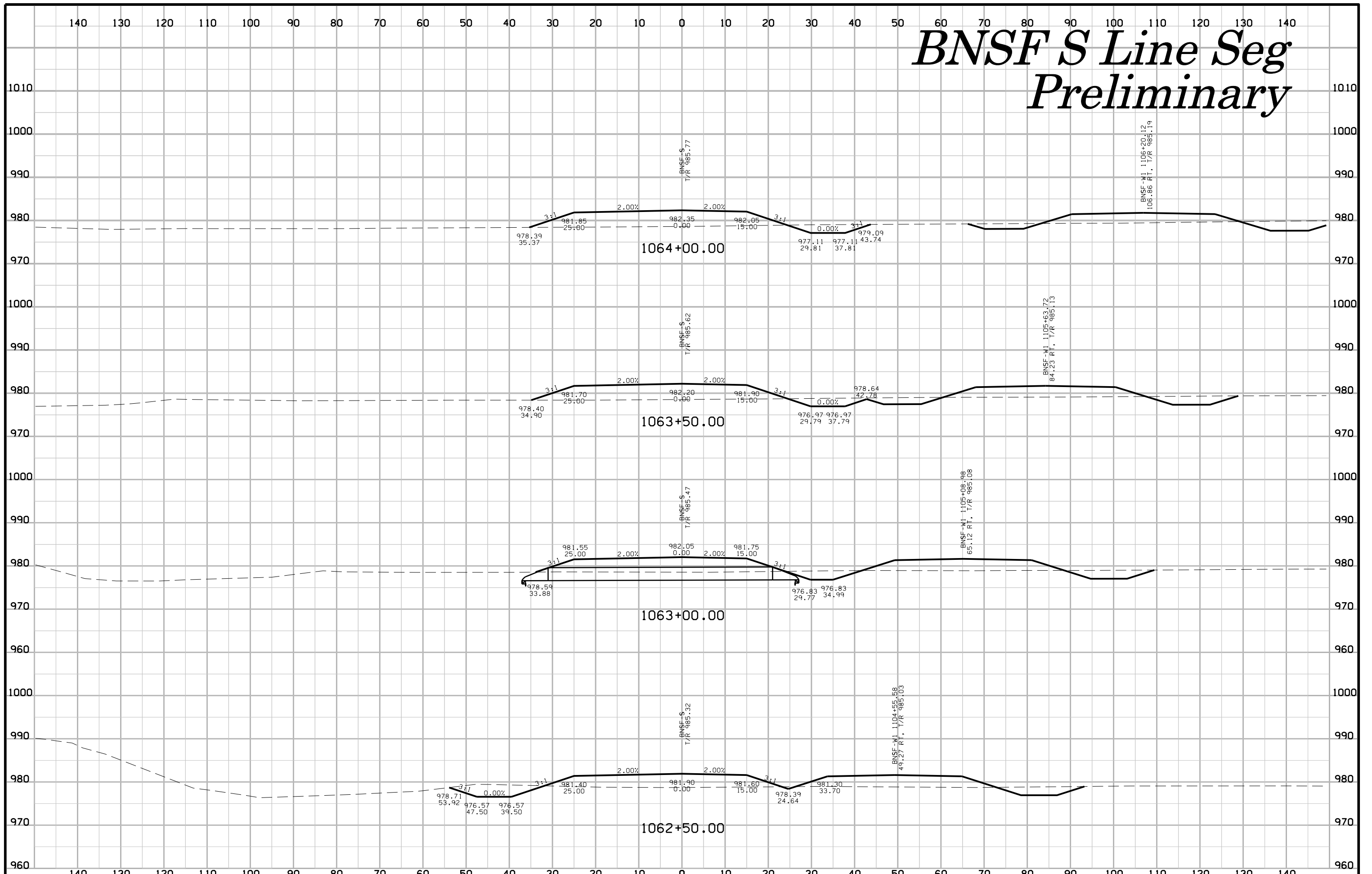
BNSF S Line Seg Preliminary



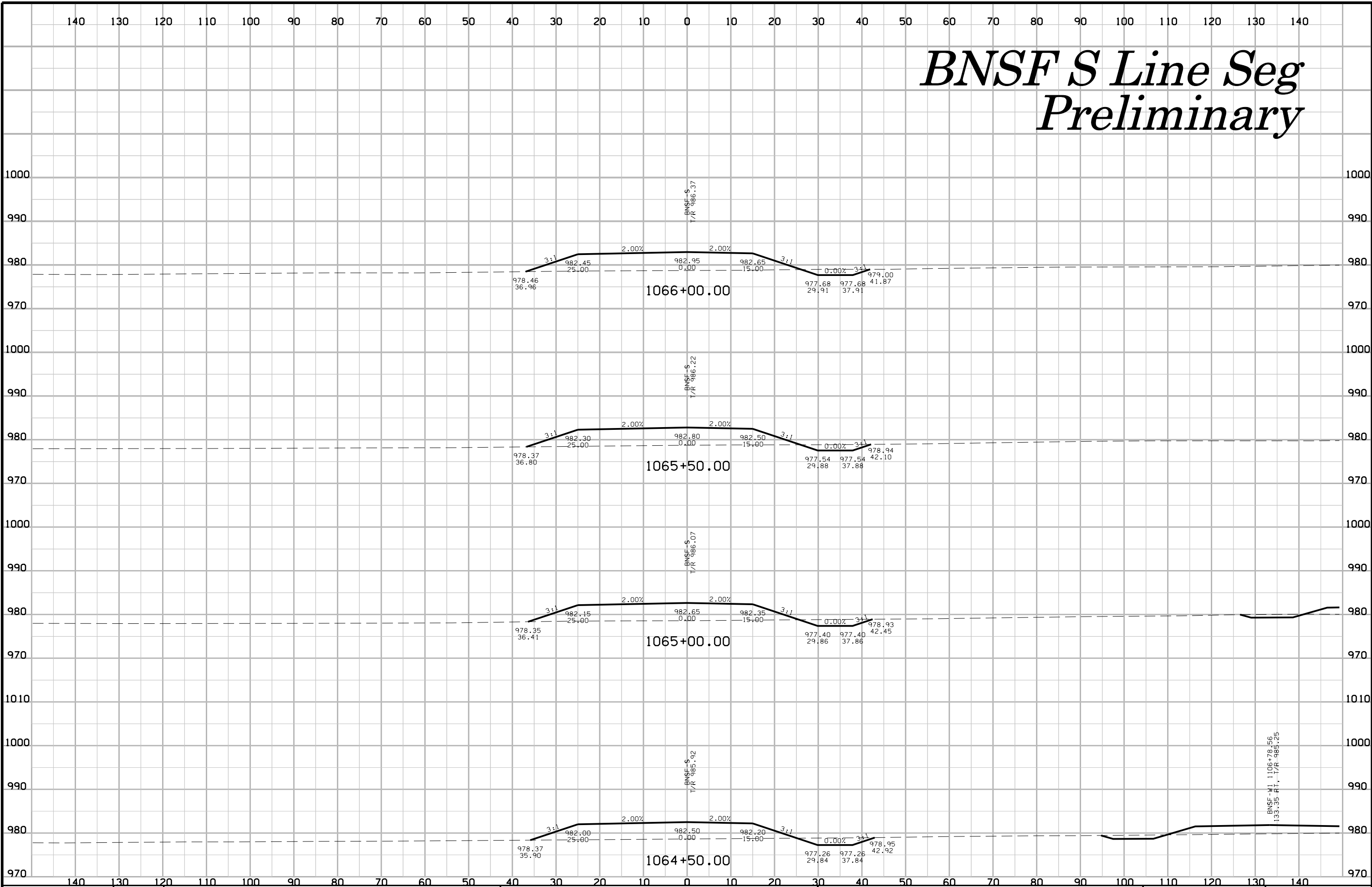
BNSF S Line Seg Preliminary



BNSF S Line Seg Preliminary

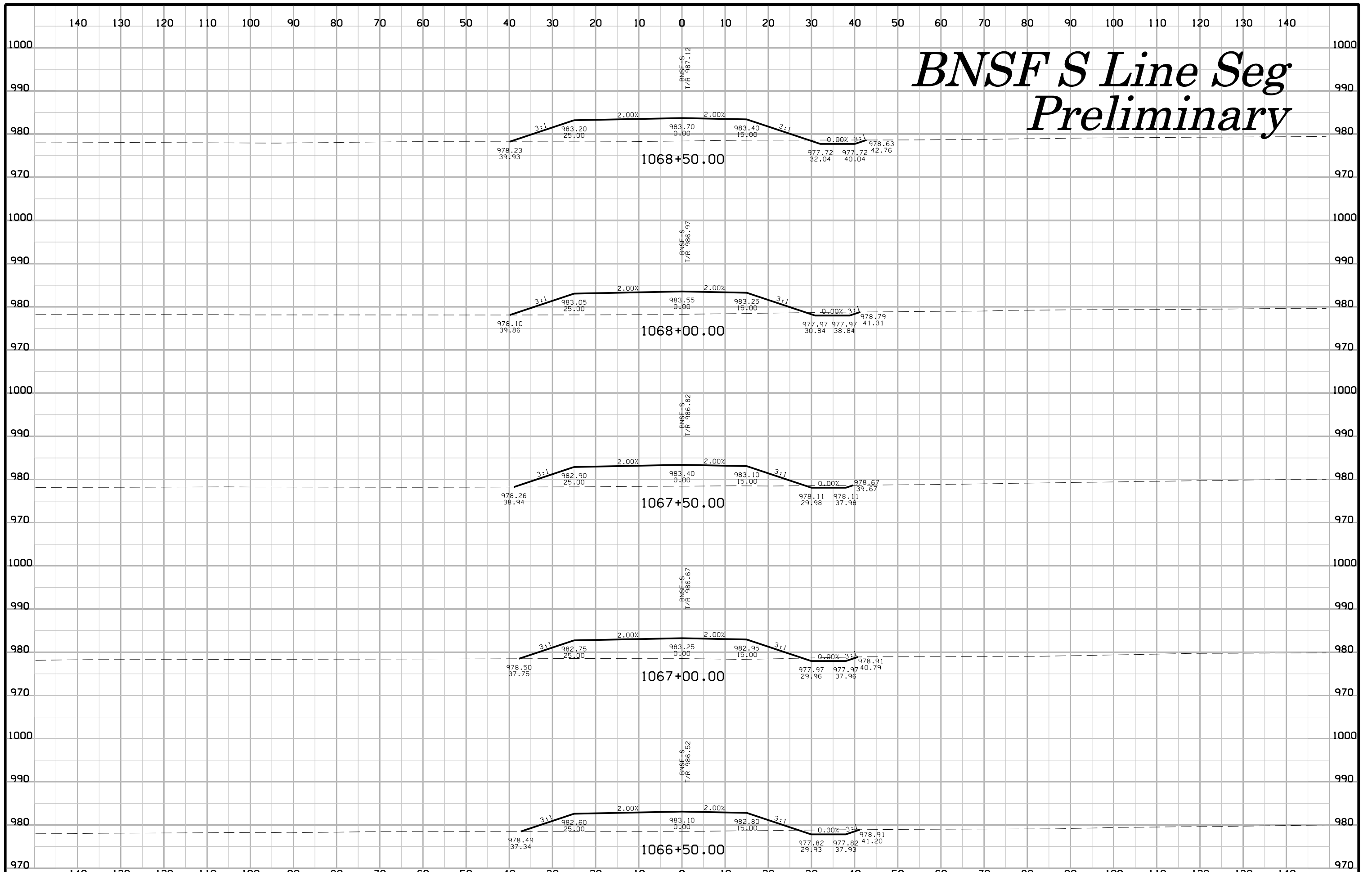


BNSF S Line Seg Preliminary

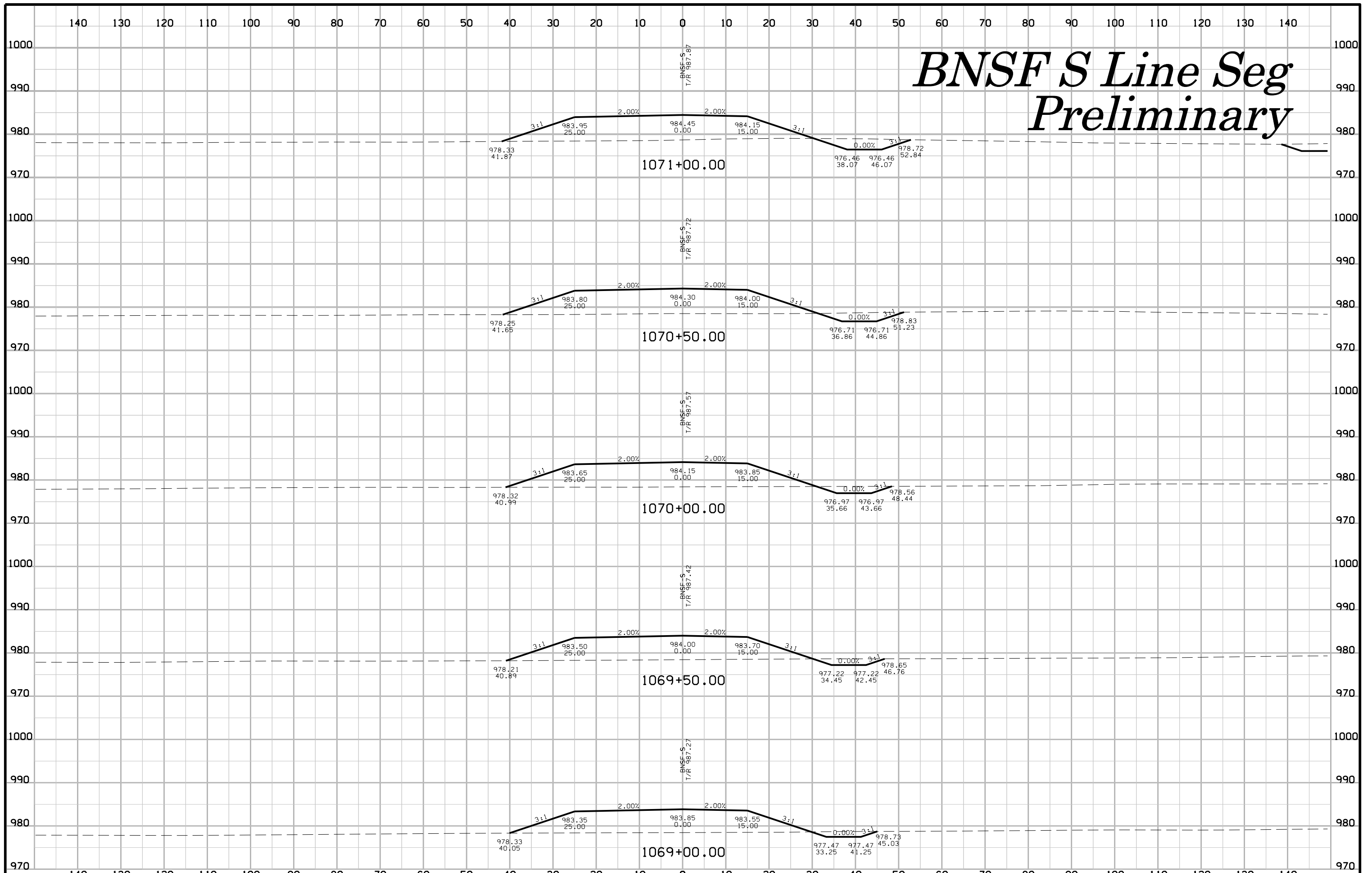


BNSF-11106-78.56
133.35 ft, 1/R 985.25

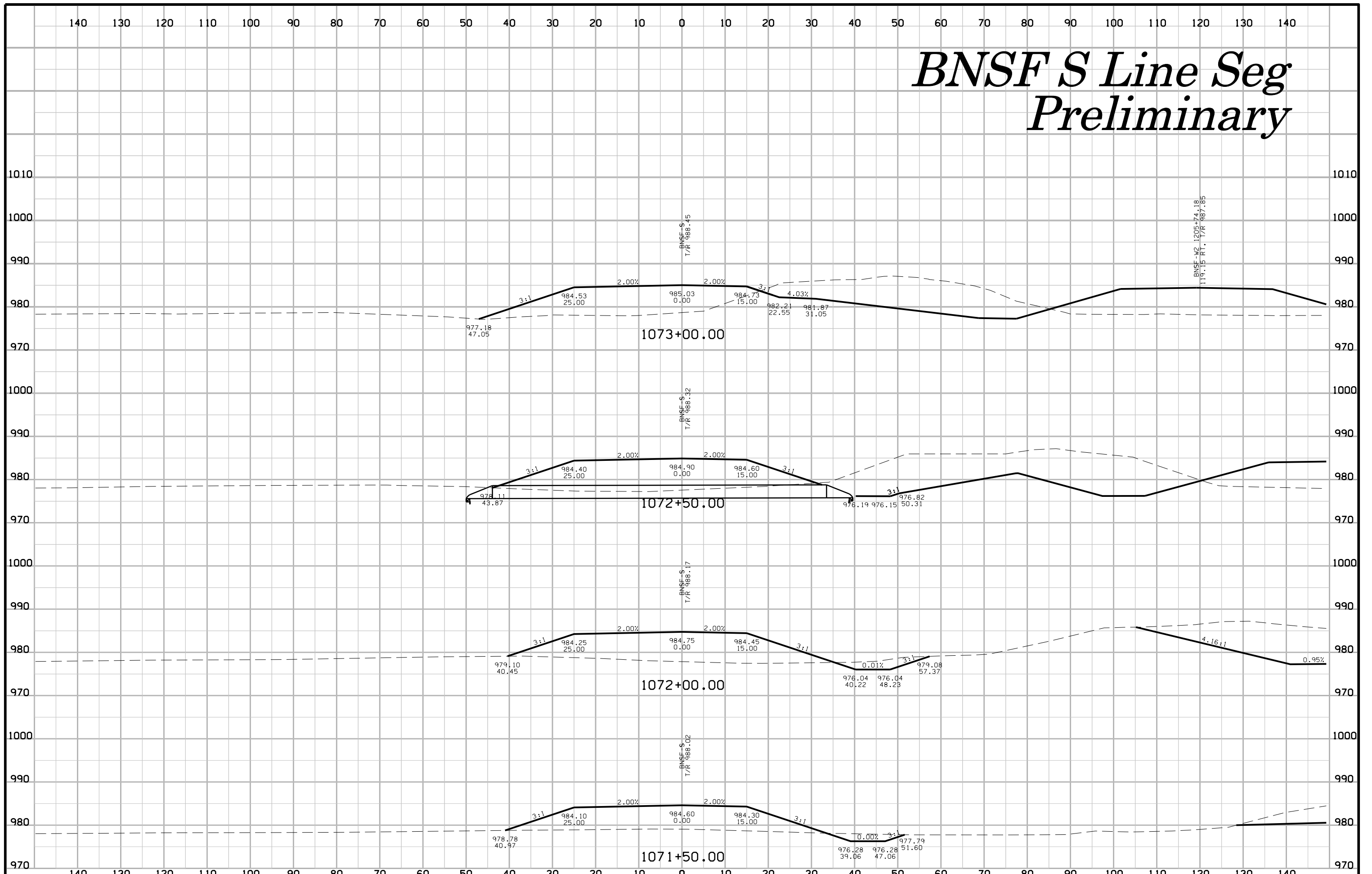
BNSF S Line Seg Preliminary



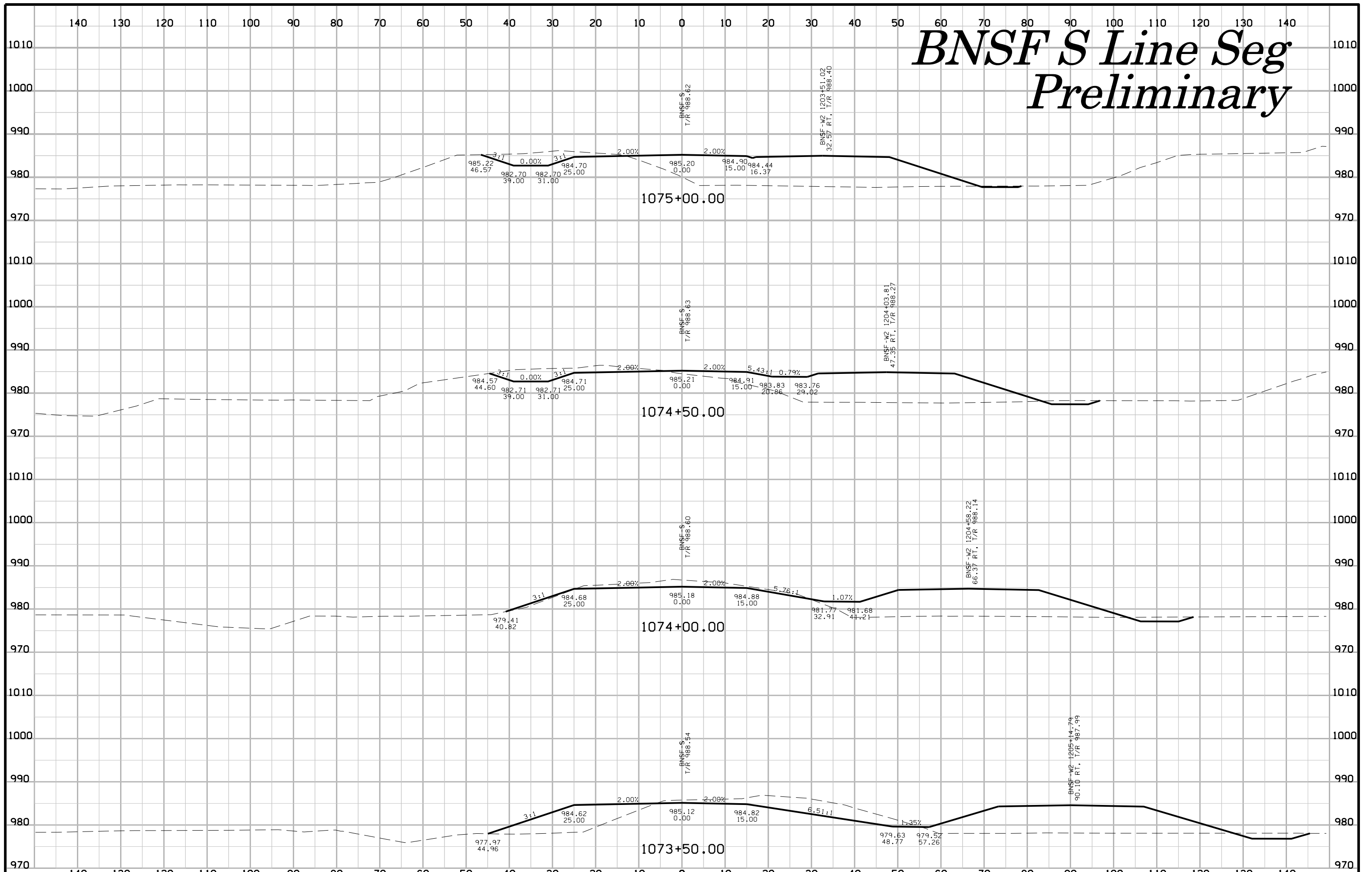
BNSF S Line Seg Preliminary



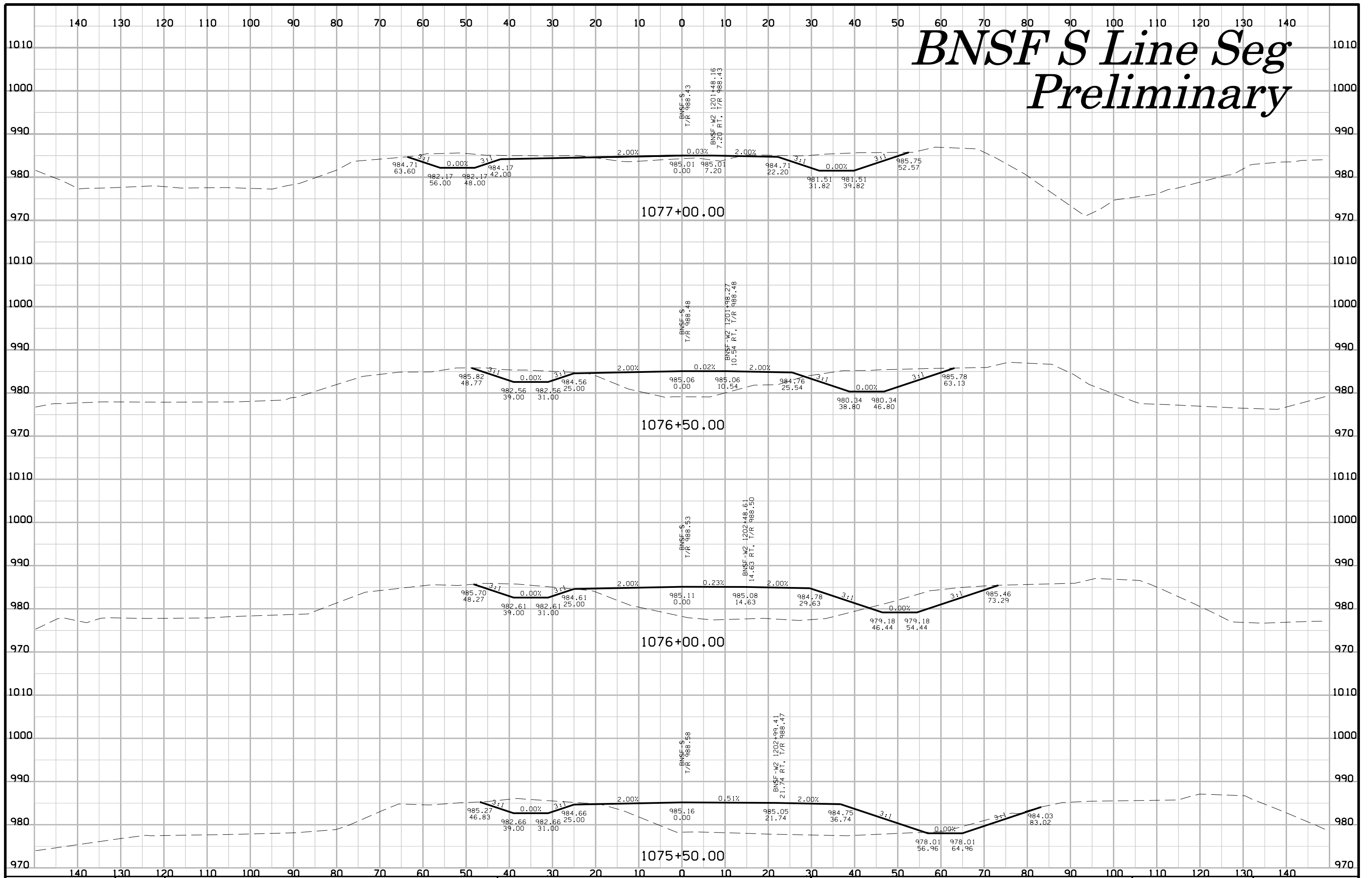
BNSF S Line Seg Preliminary



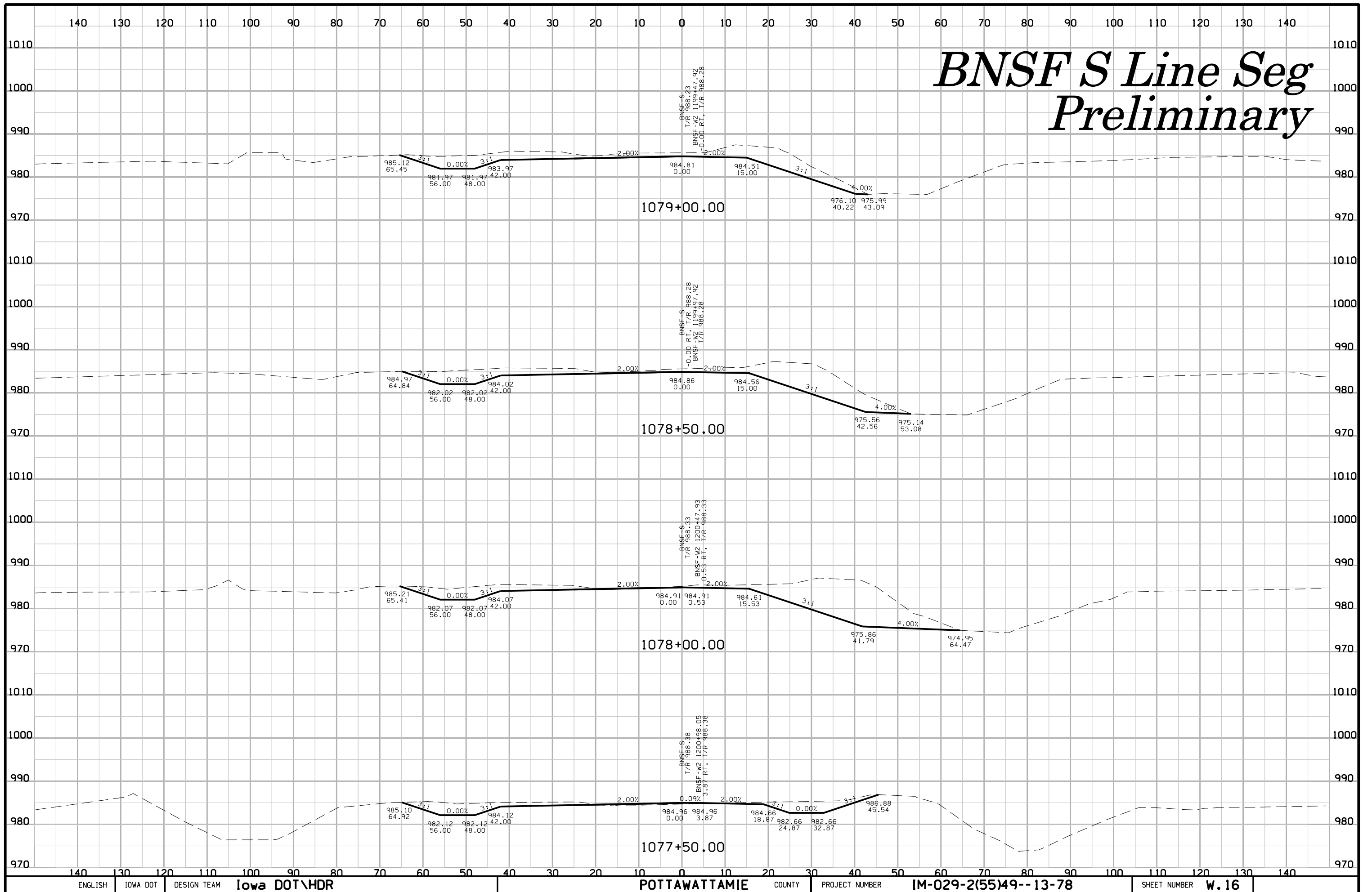
BNSF S Line Seg Preliminary



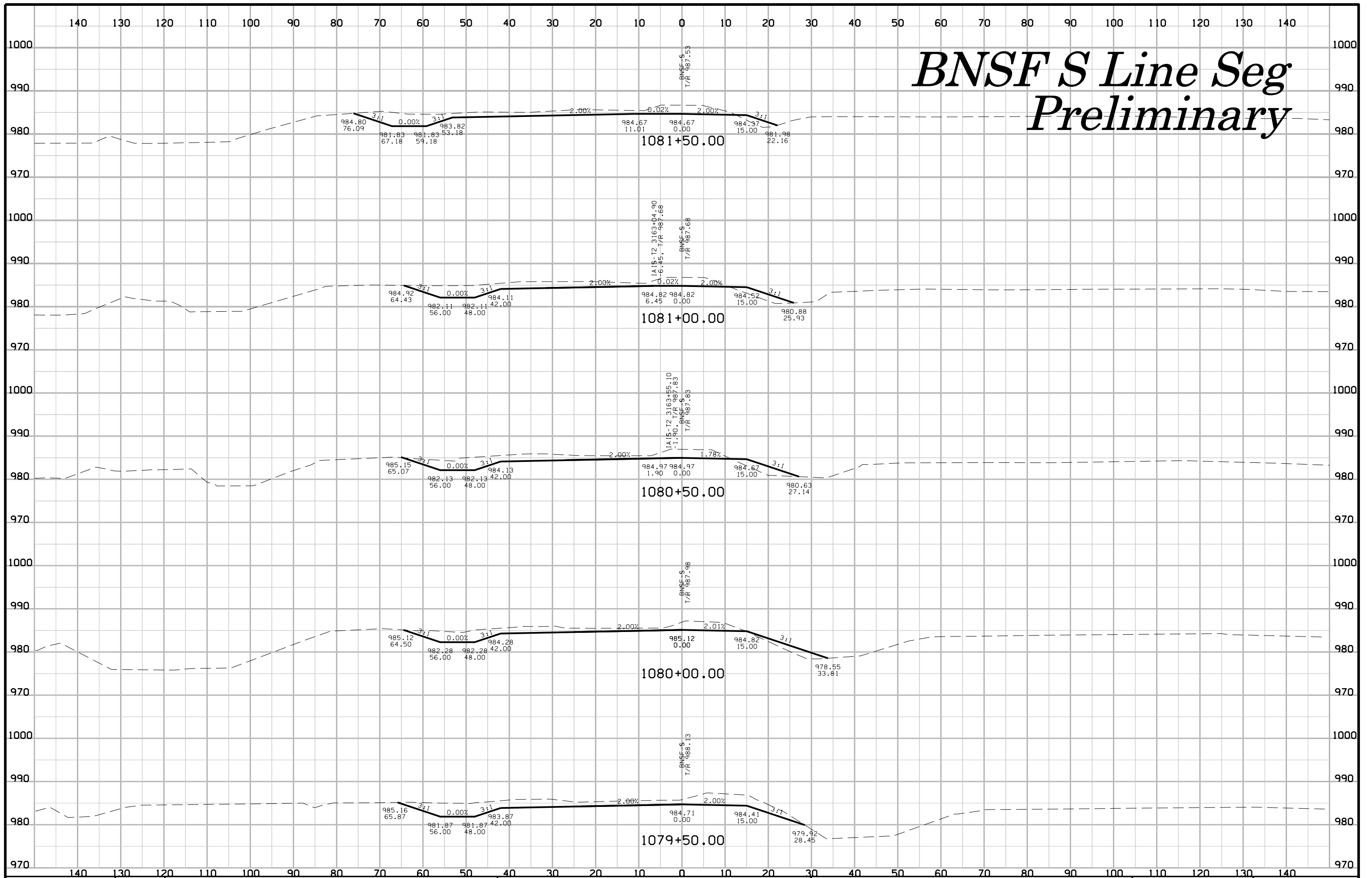
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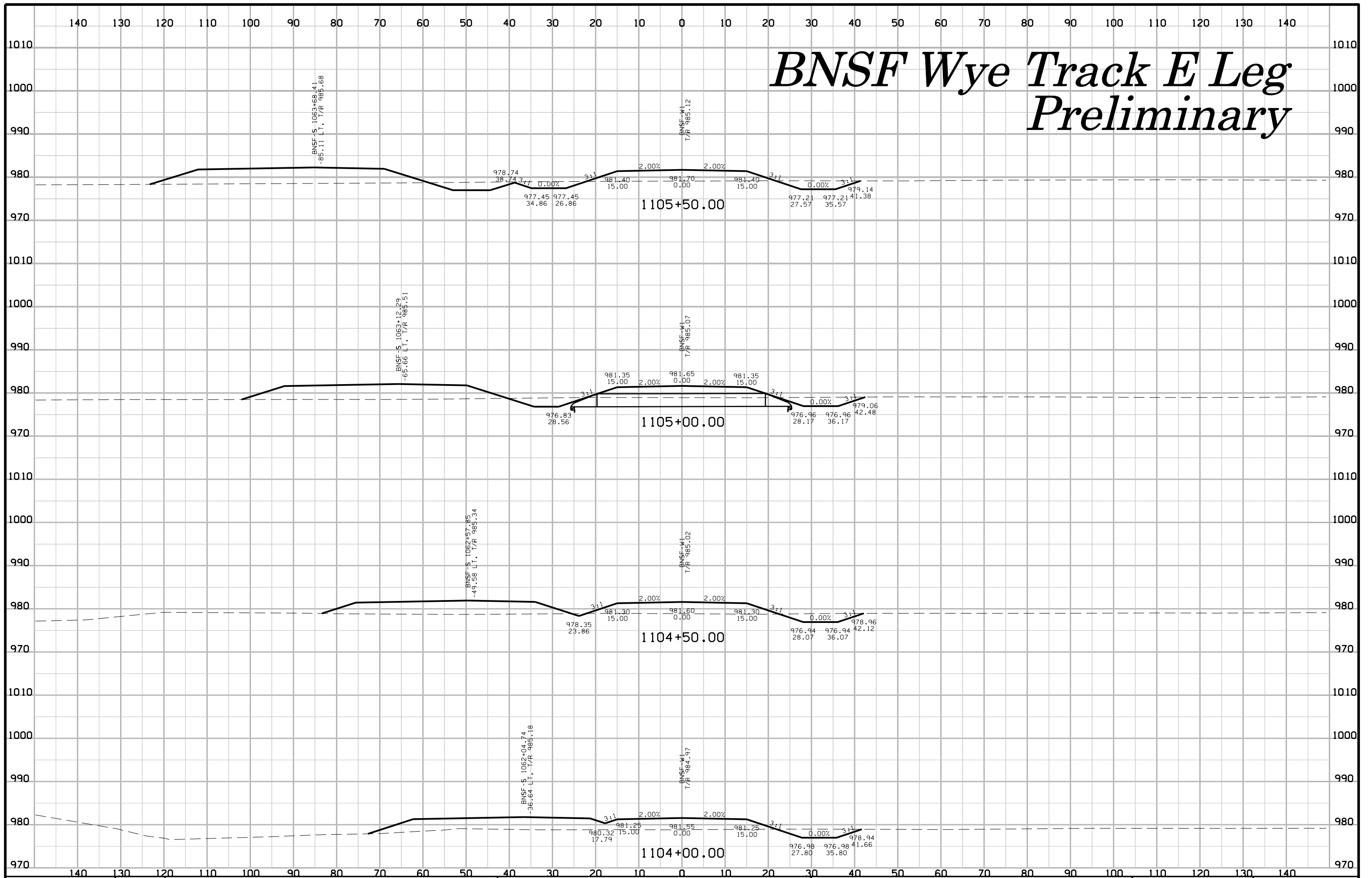
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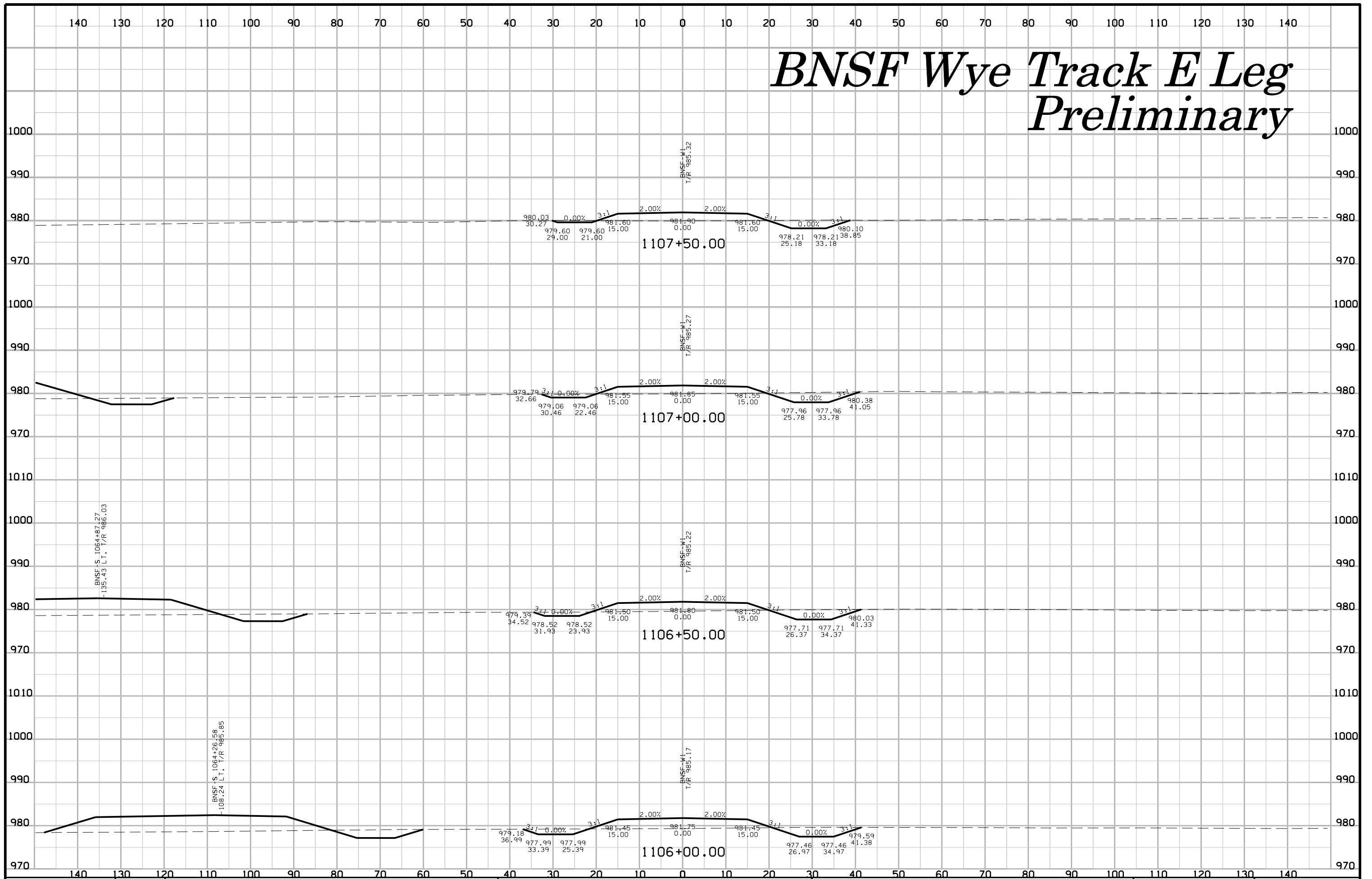
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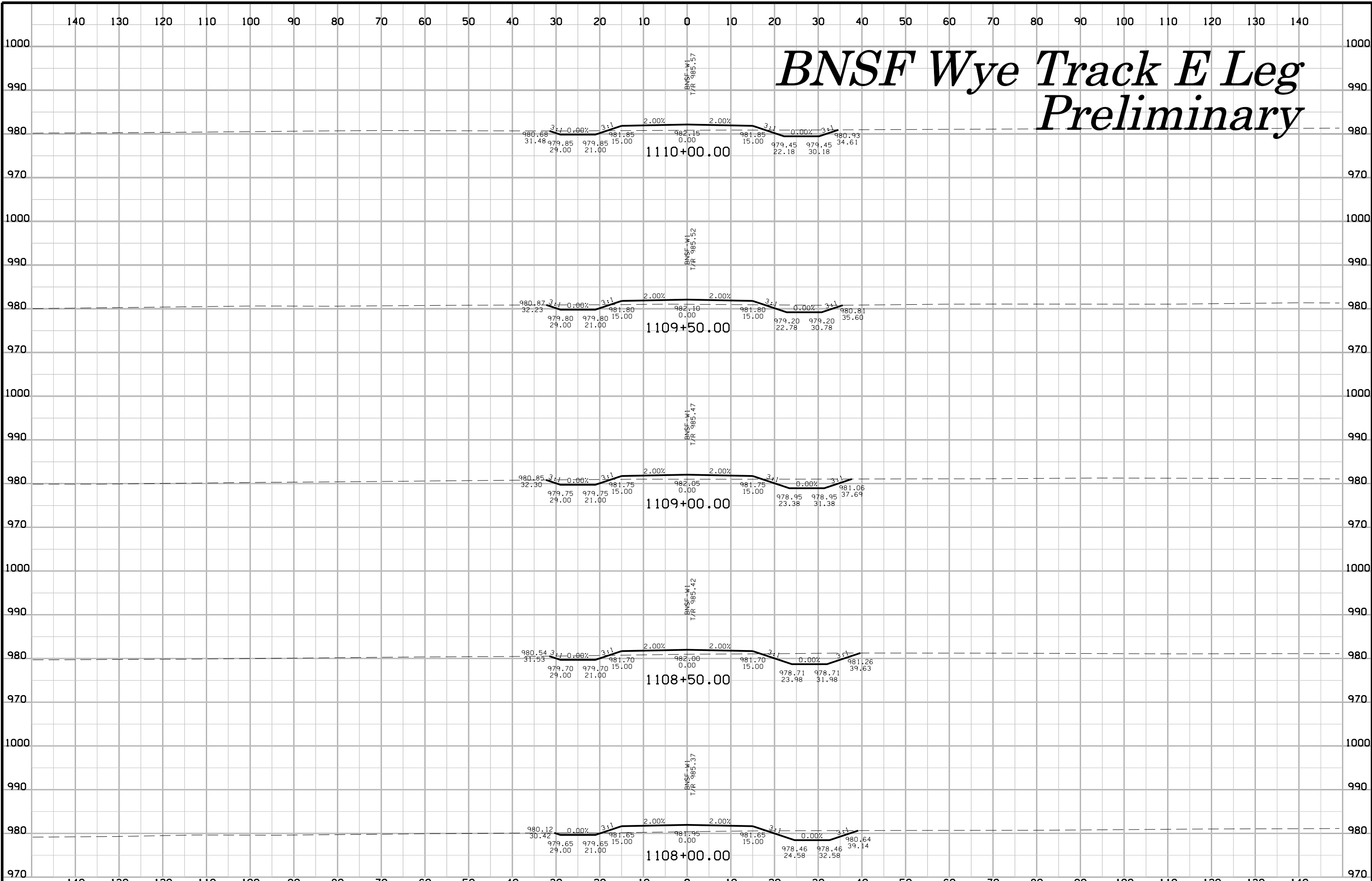
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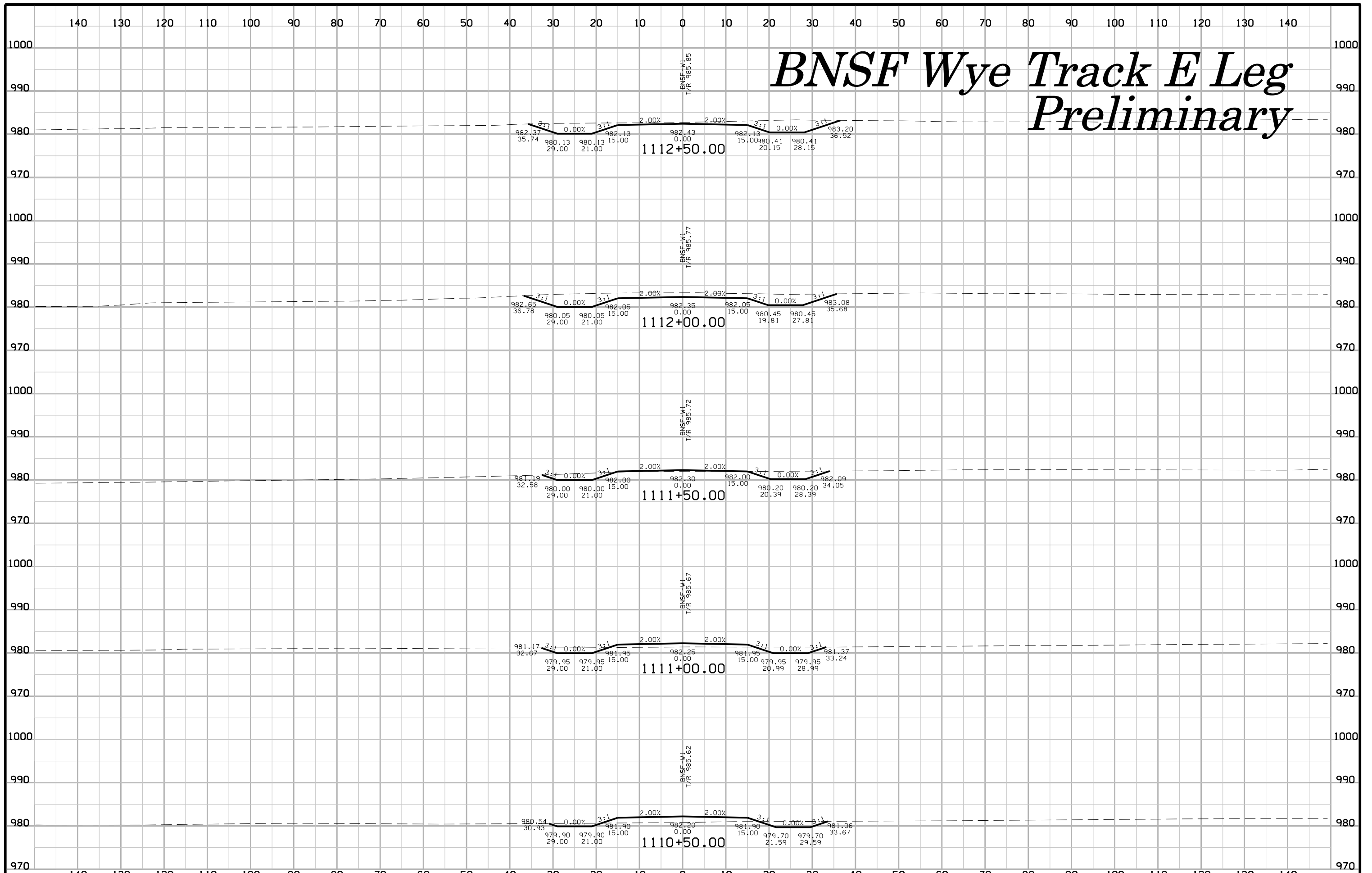
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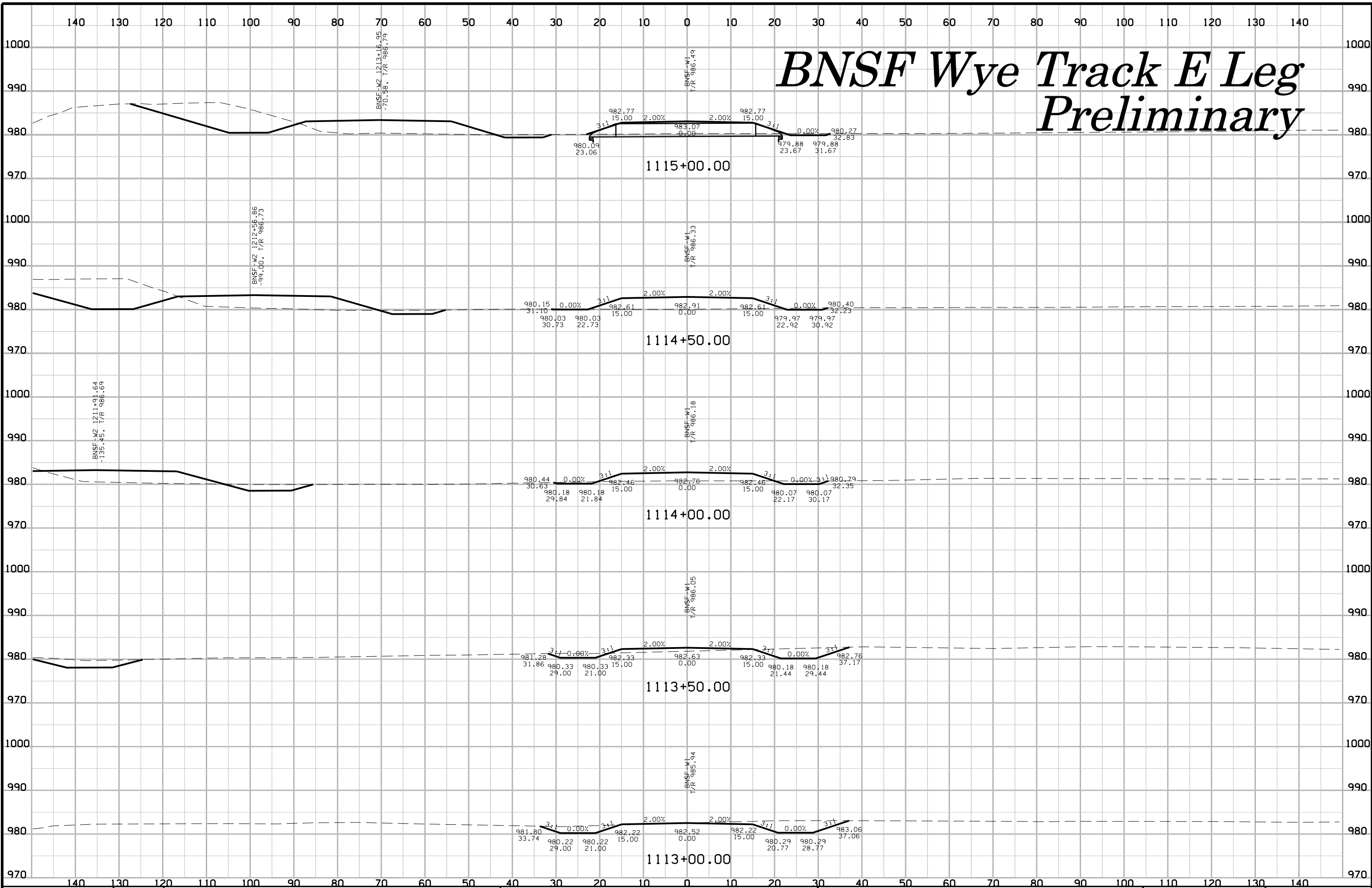
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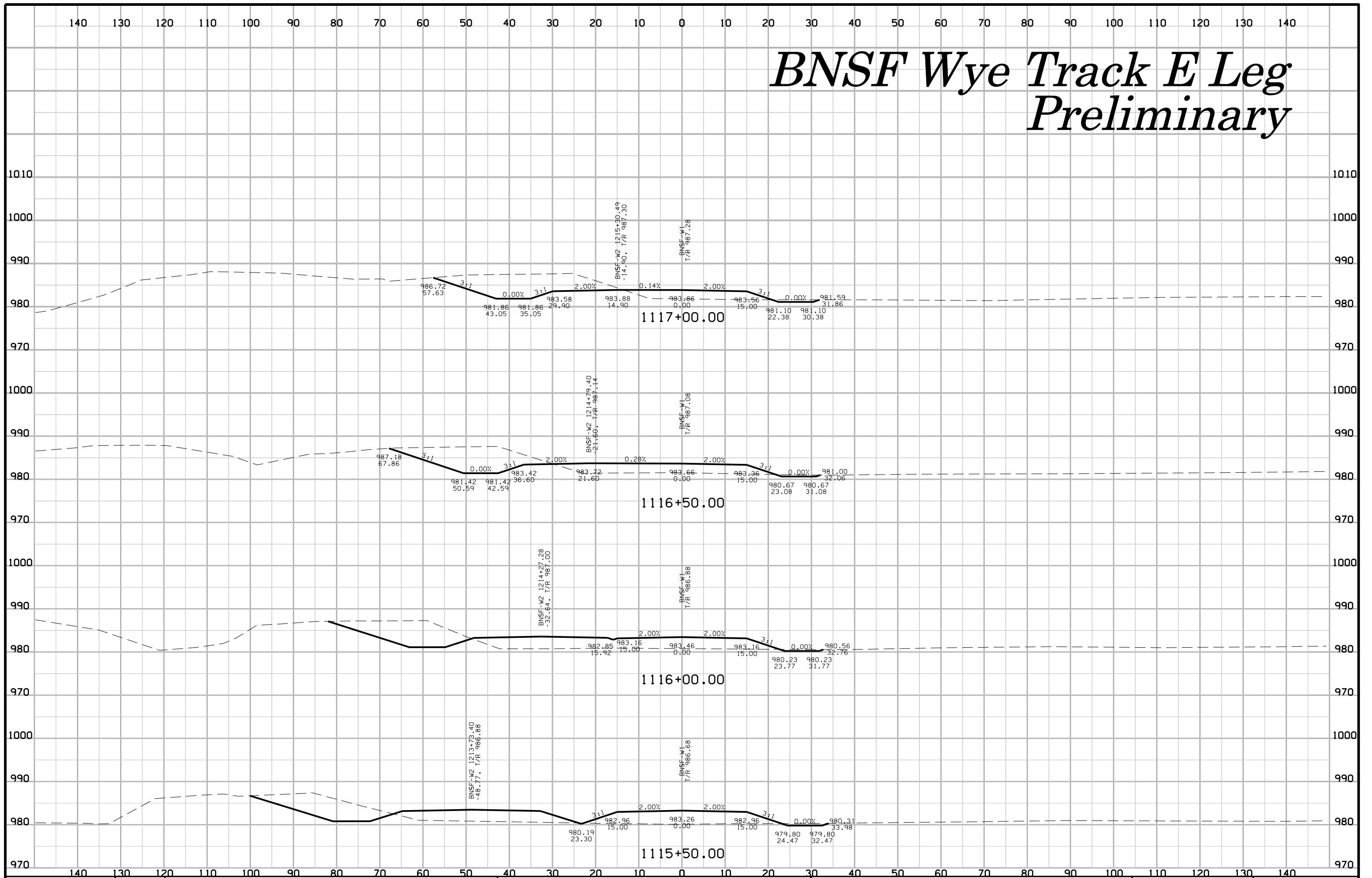
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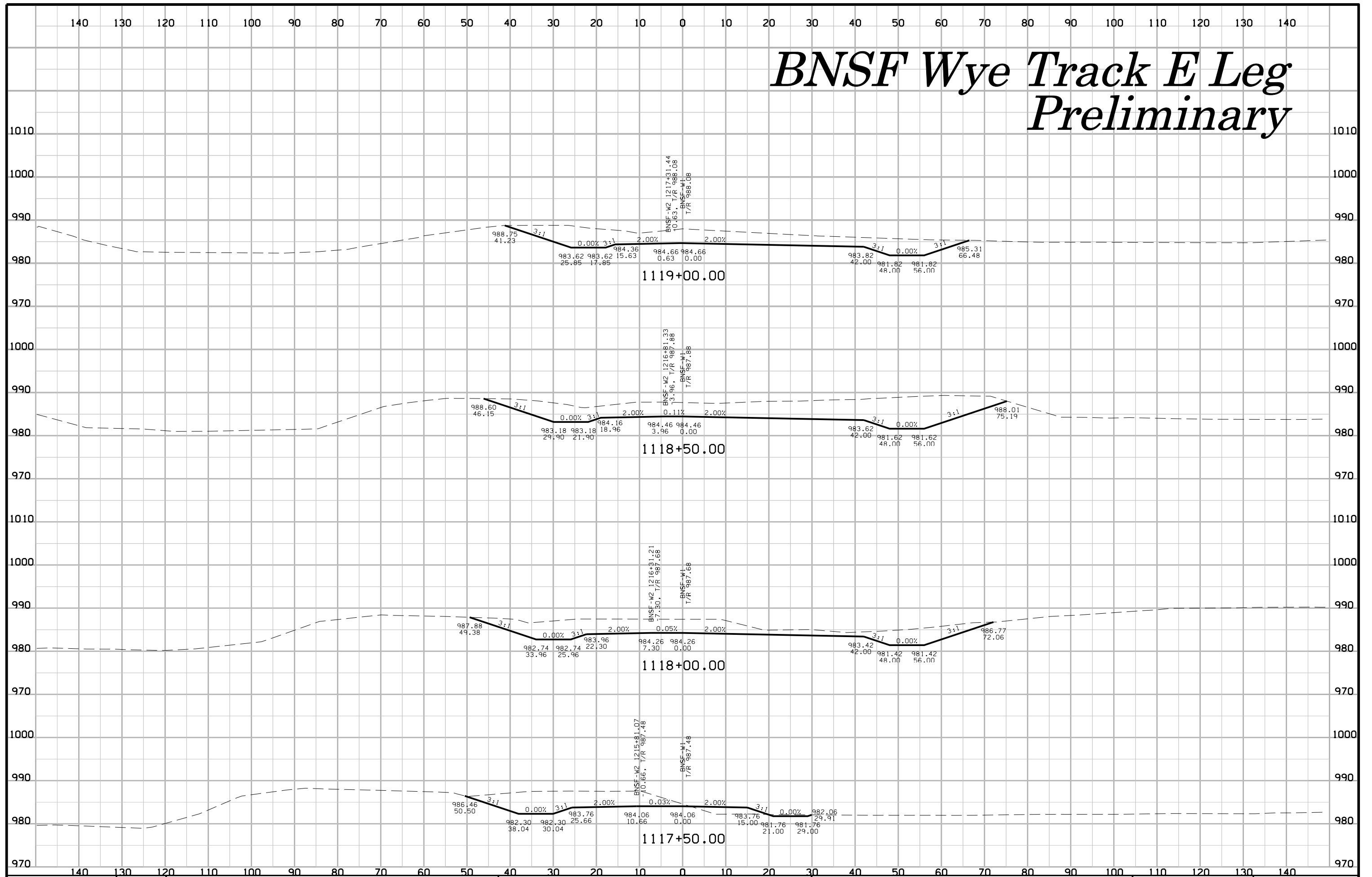
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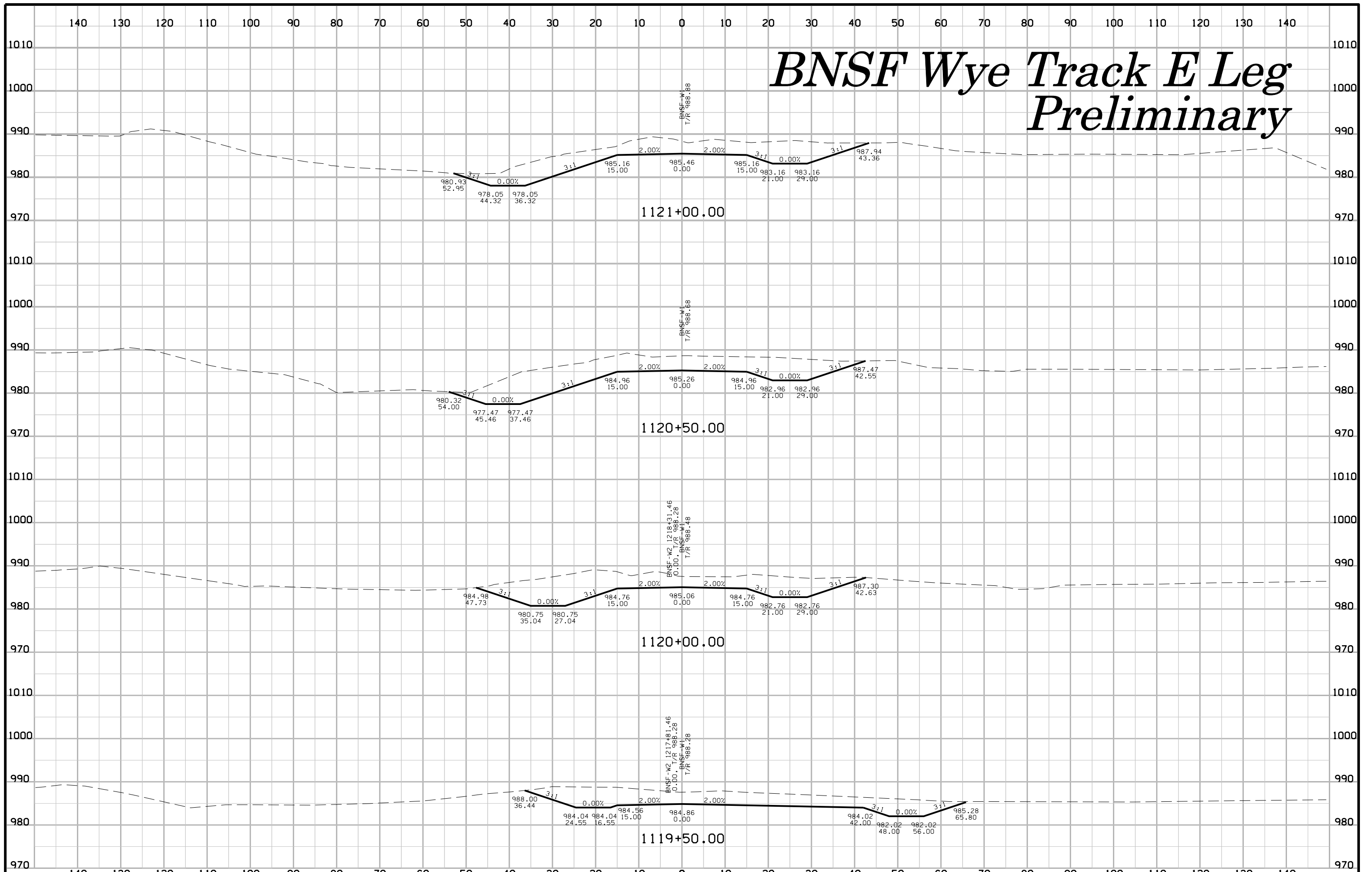
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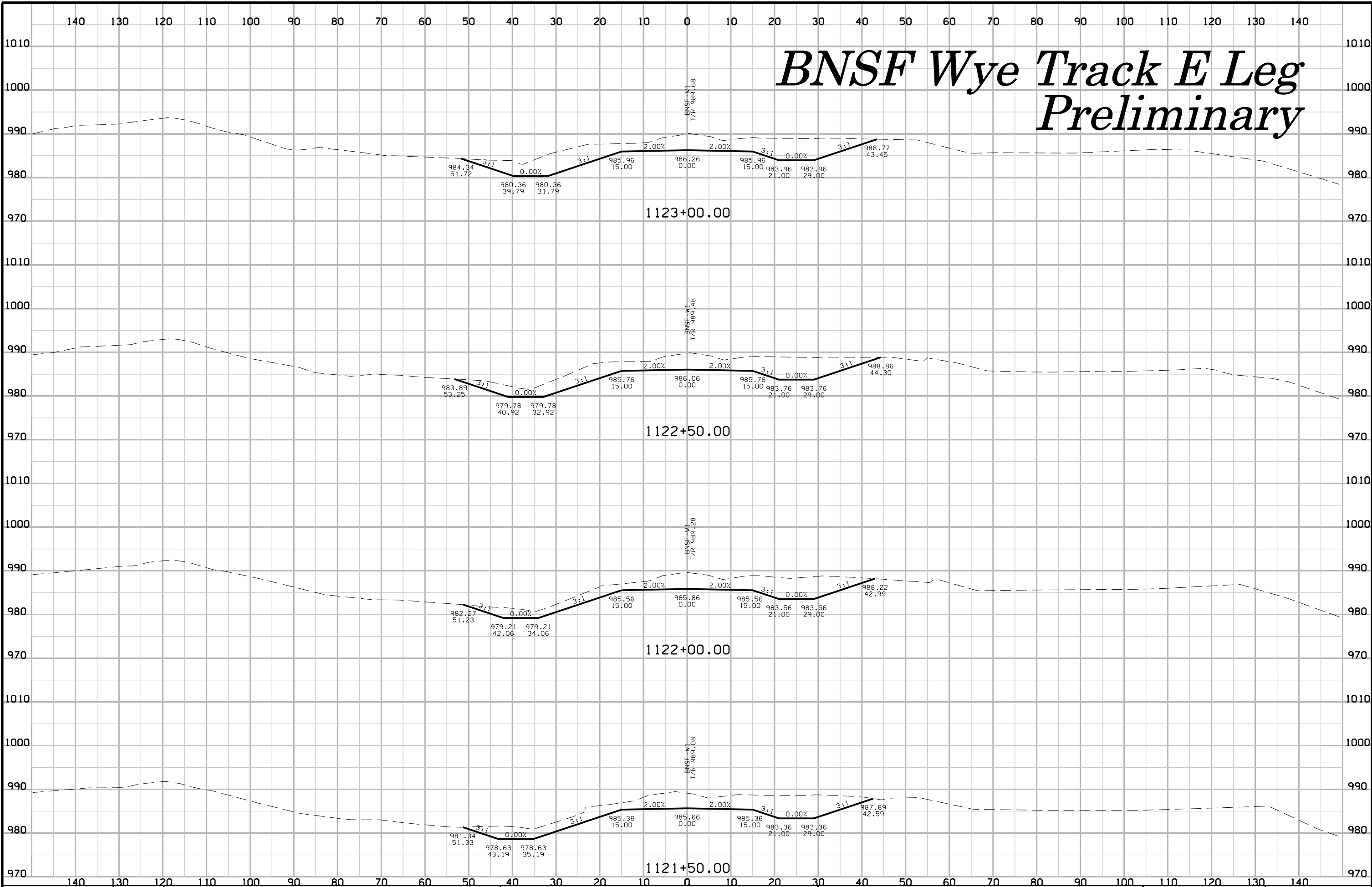
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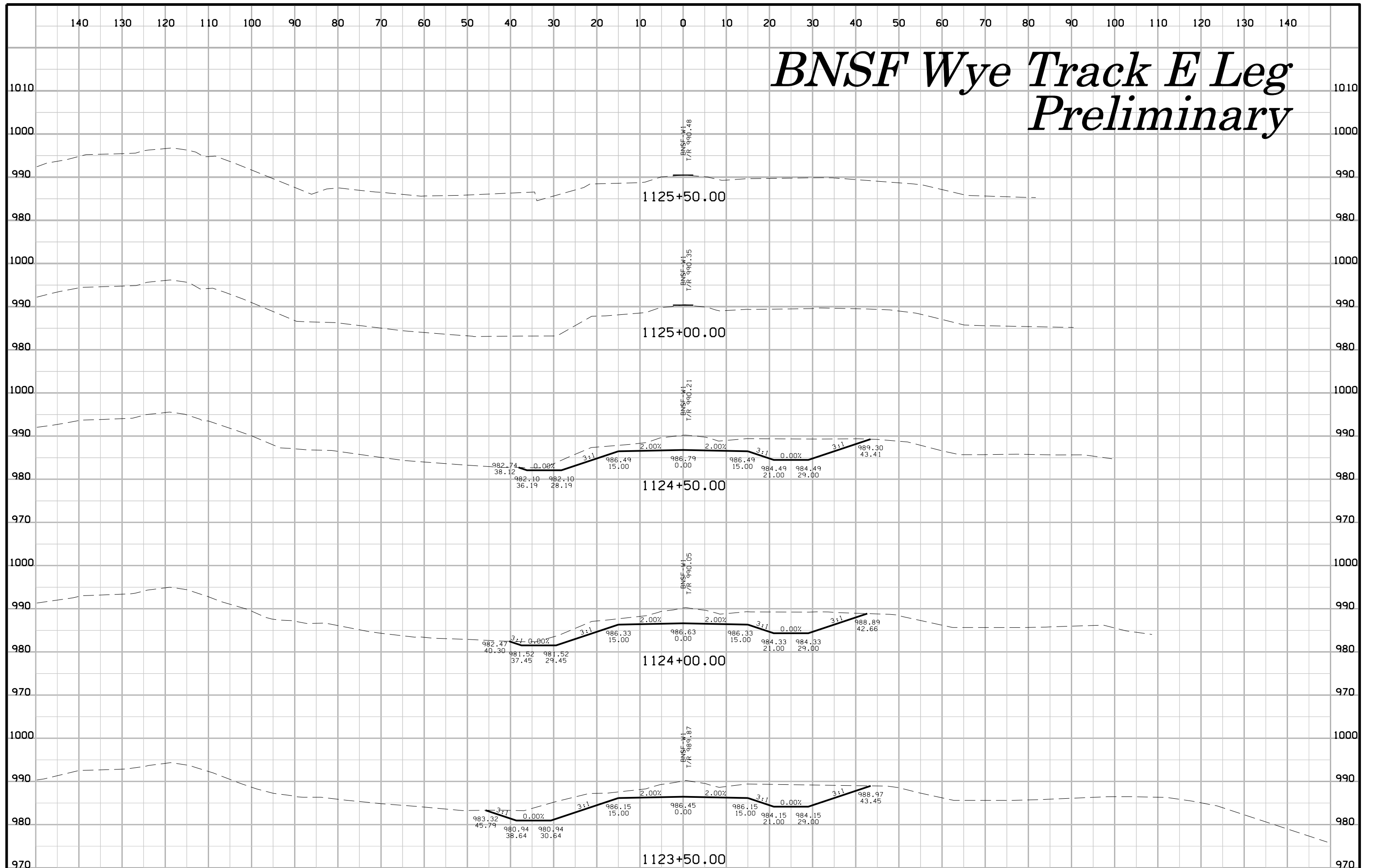
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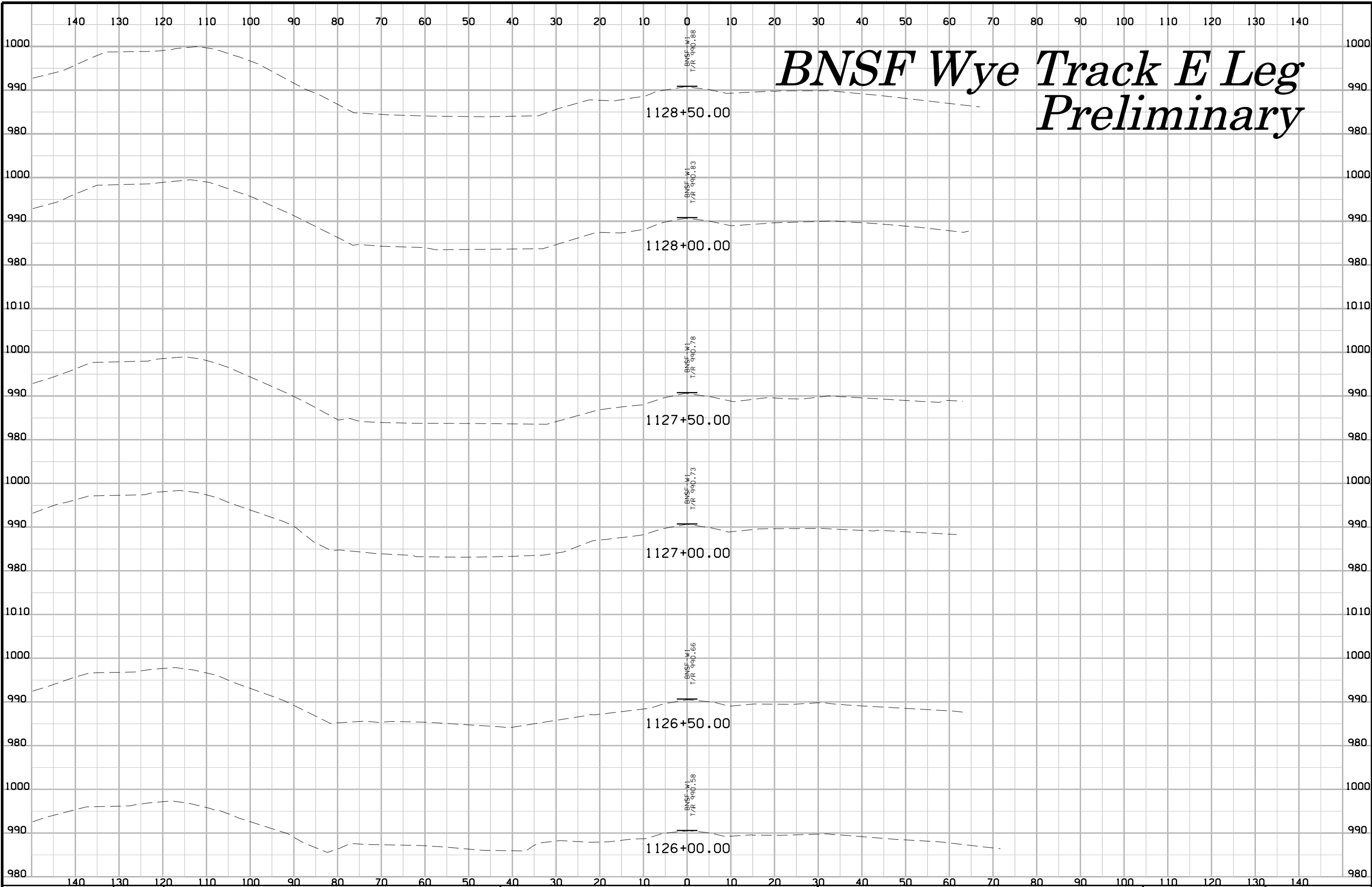
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BNSF Wye Track E Leg Preliminary

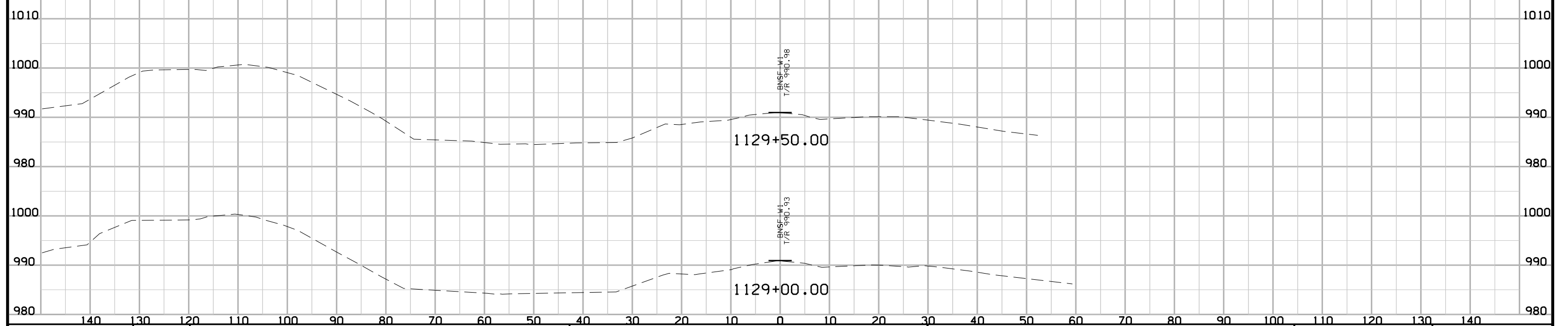


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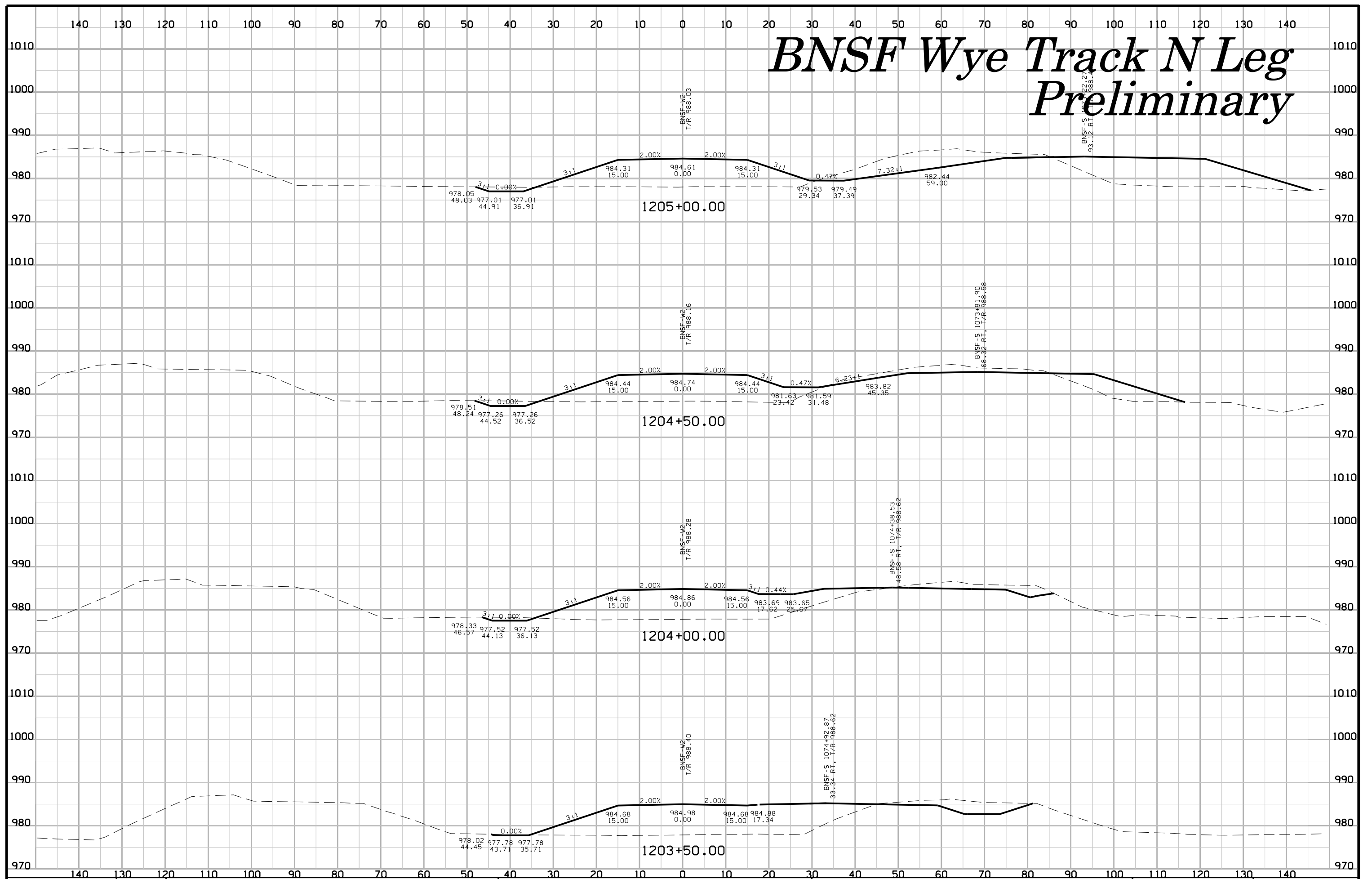


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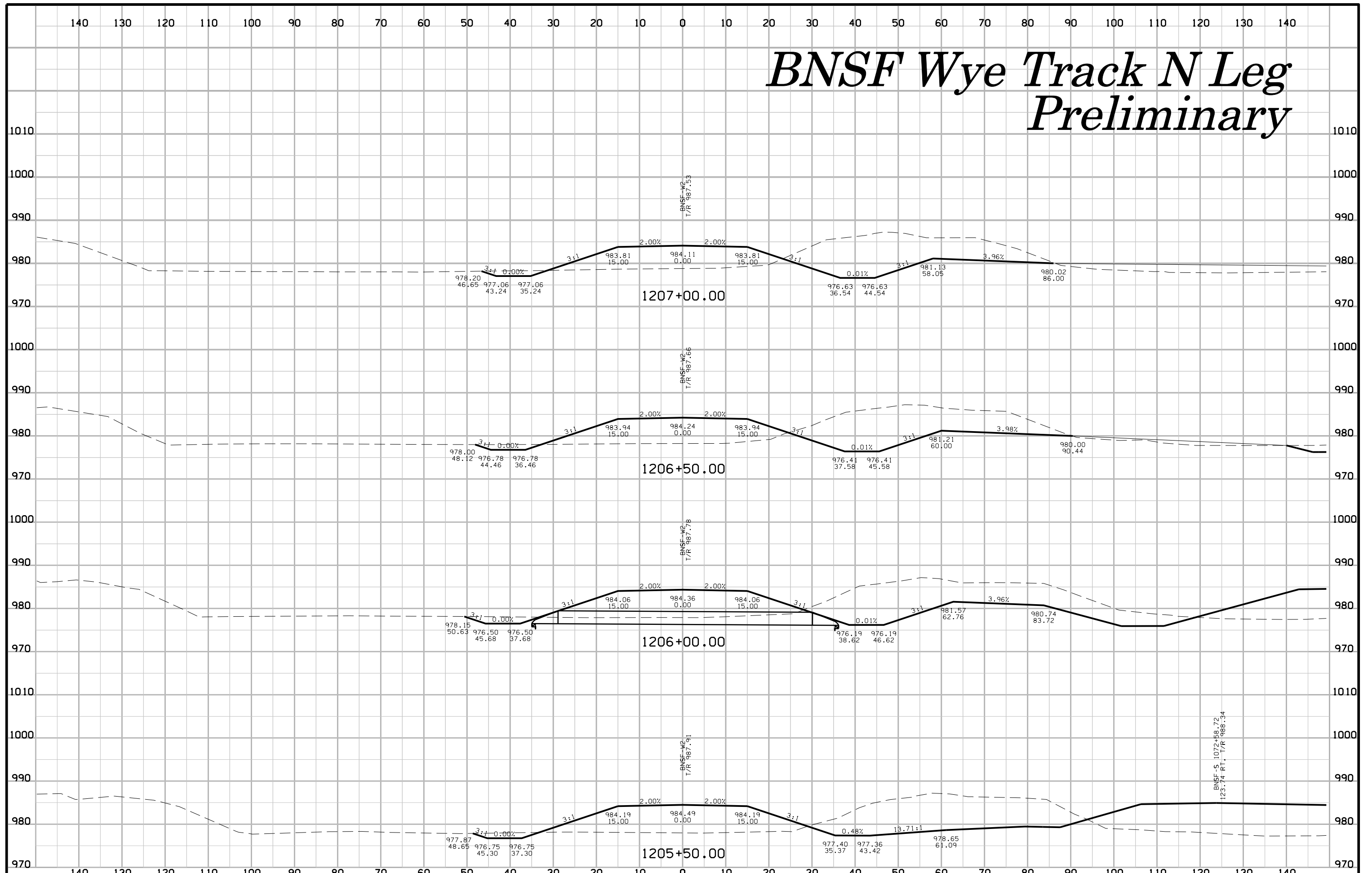
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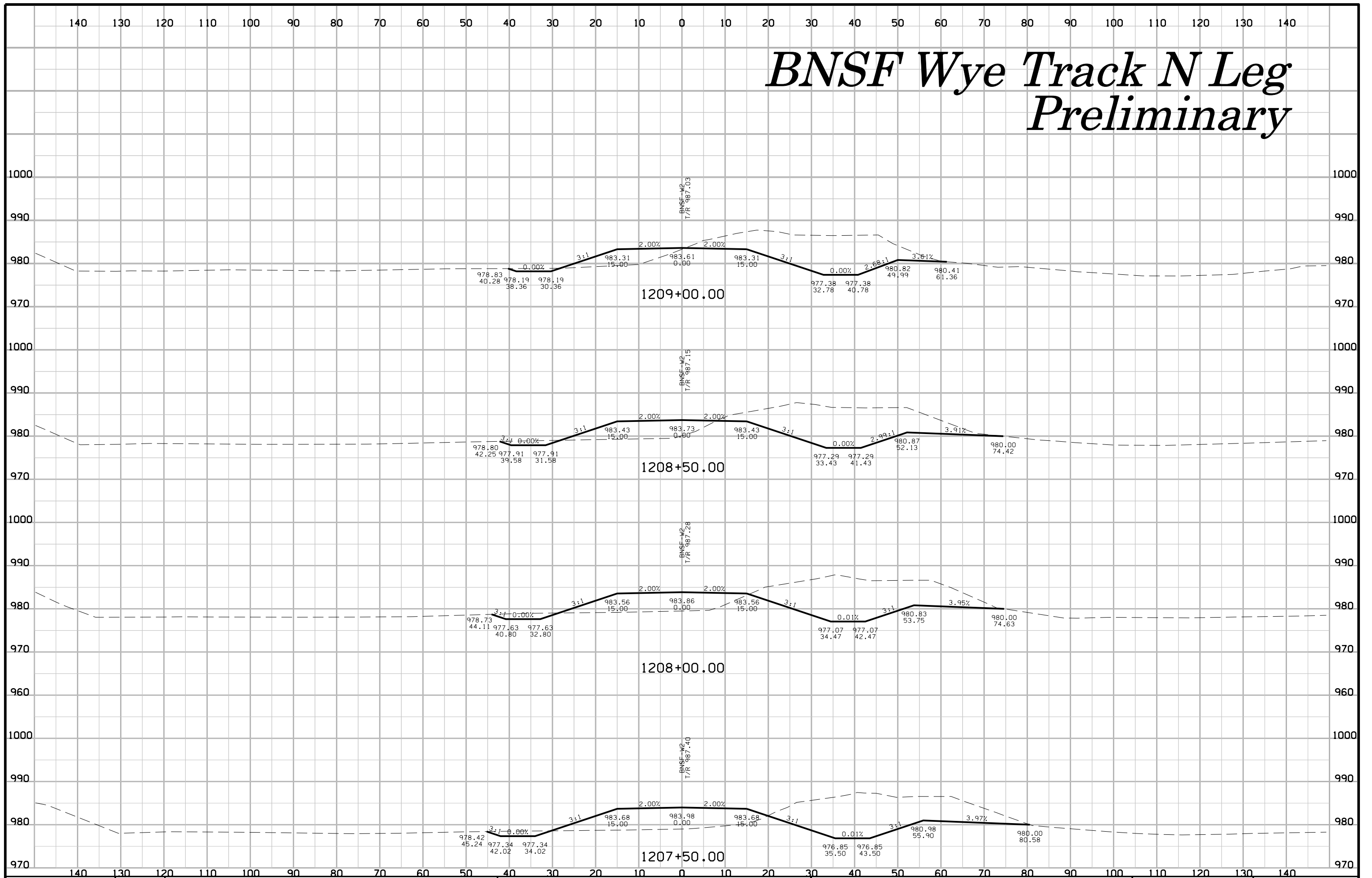
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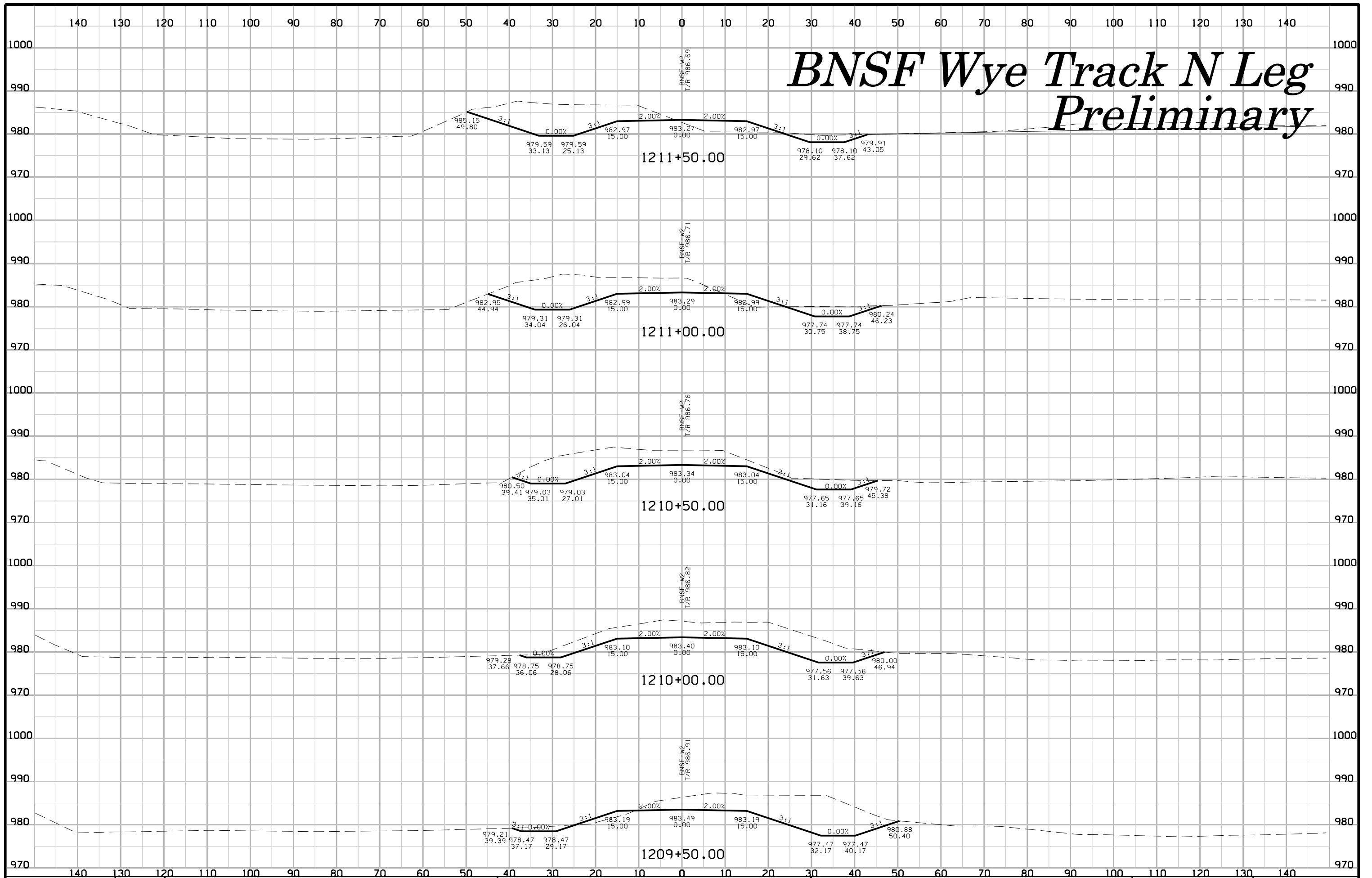
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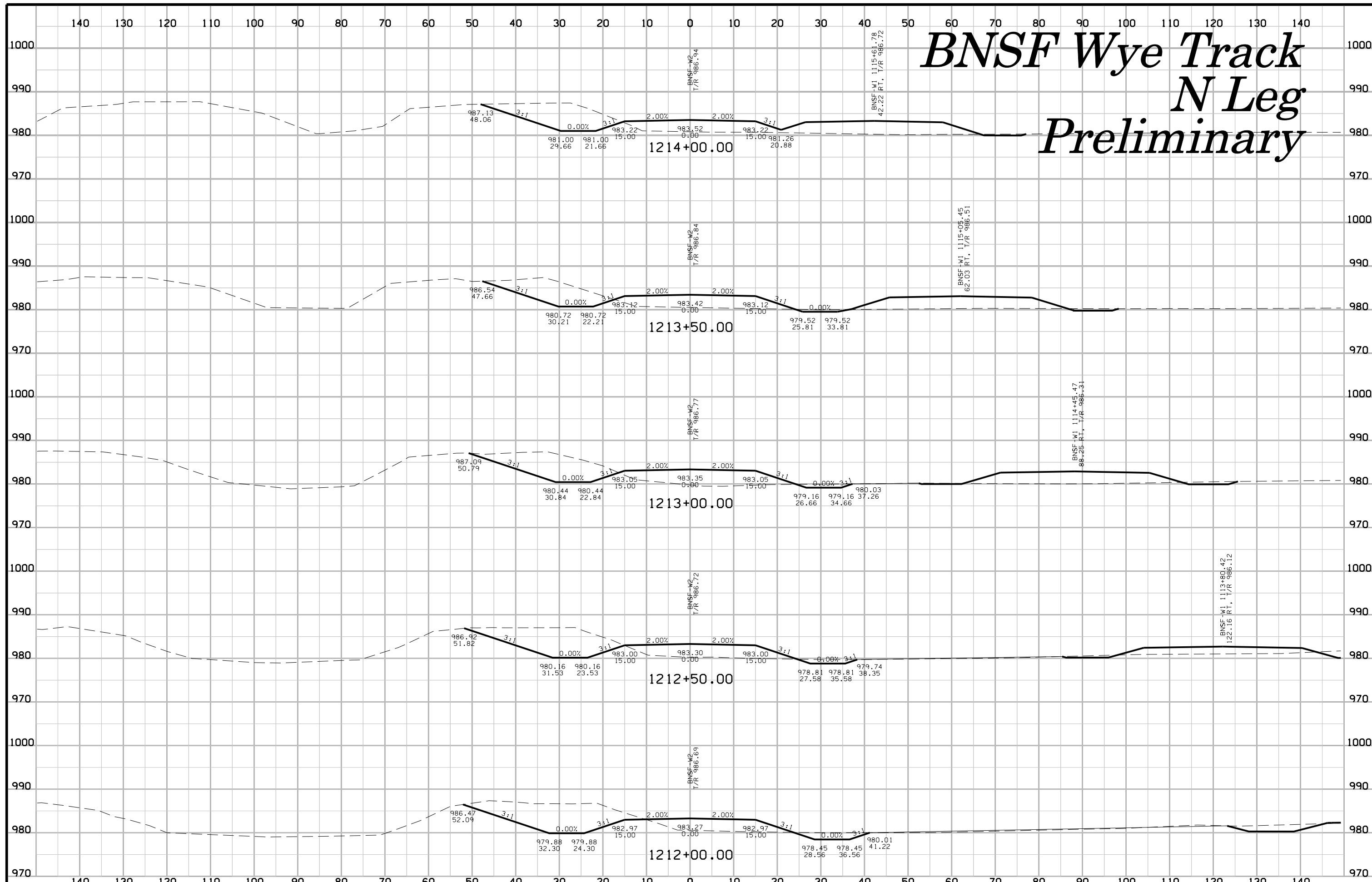
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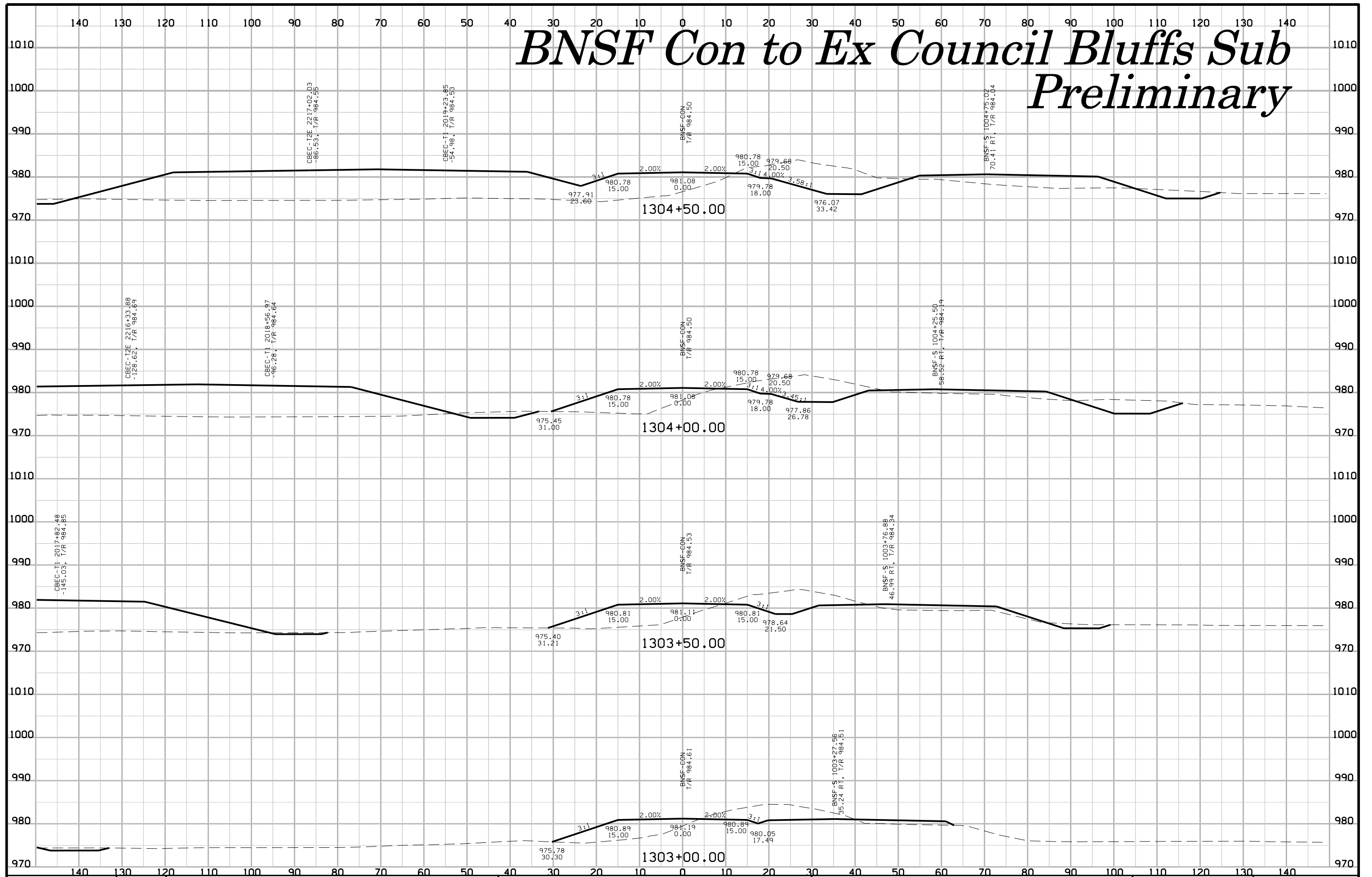
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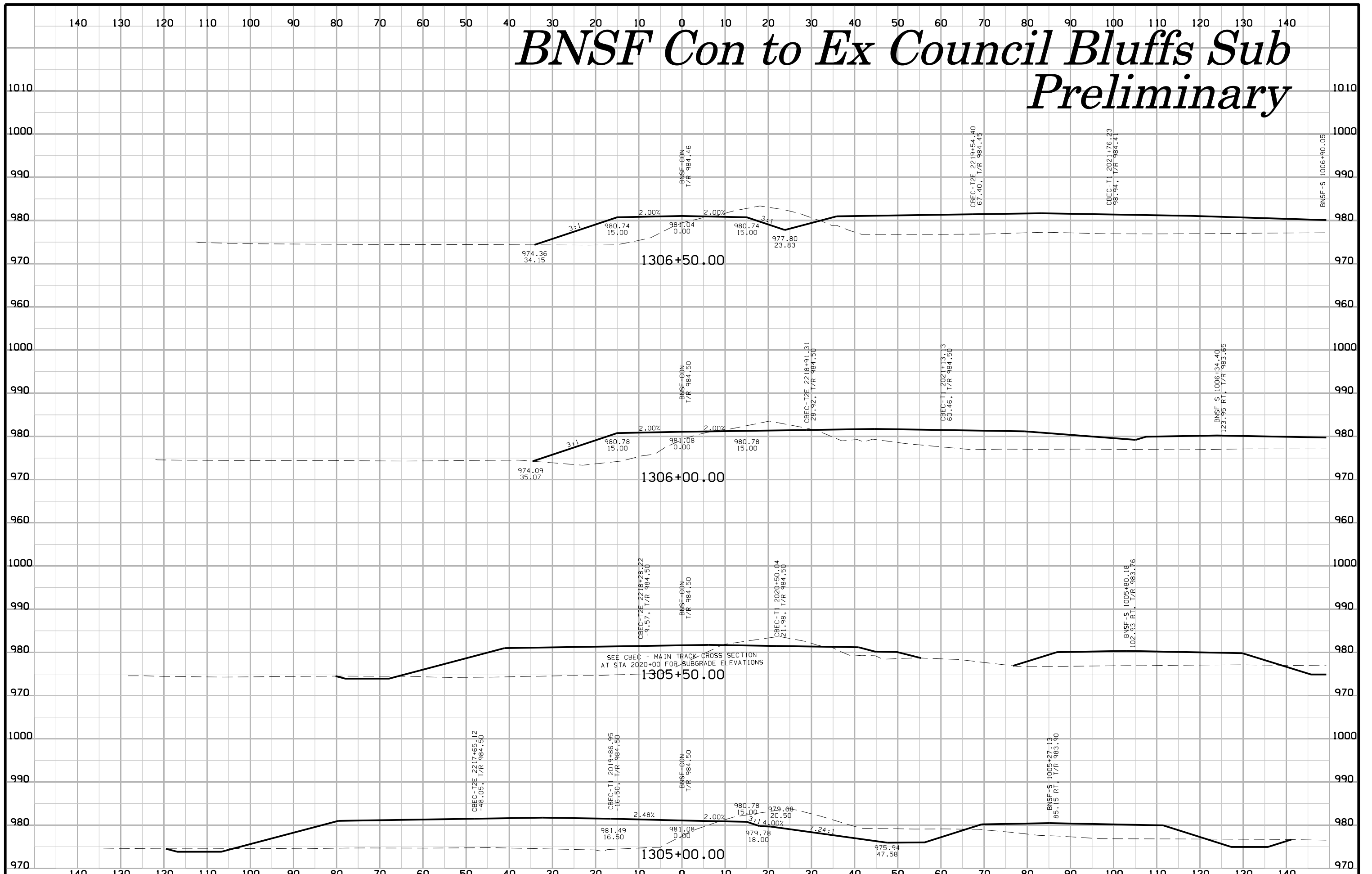
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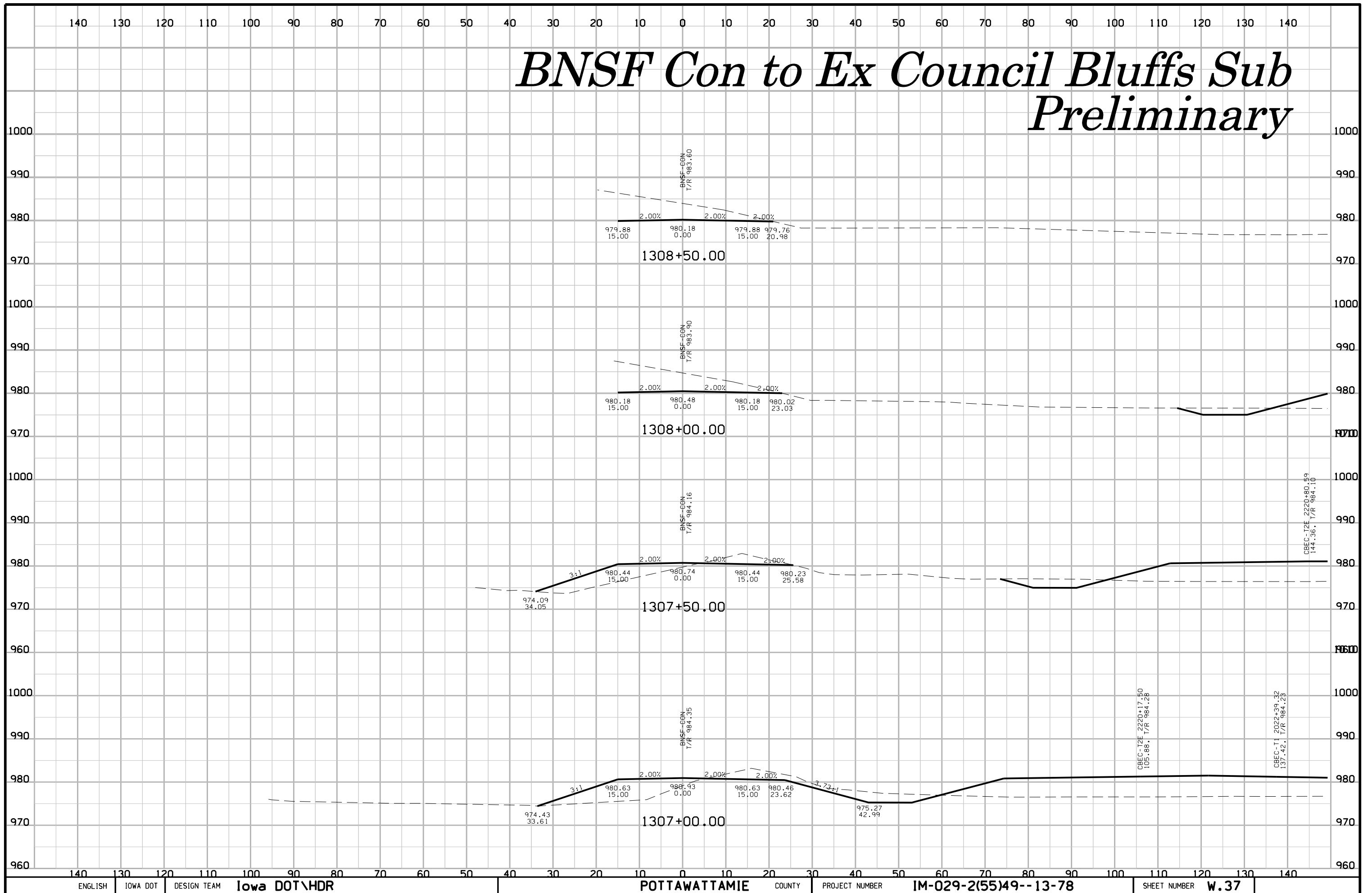
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BNSF Con to Ex Council Bluffs Sub Preliminary

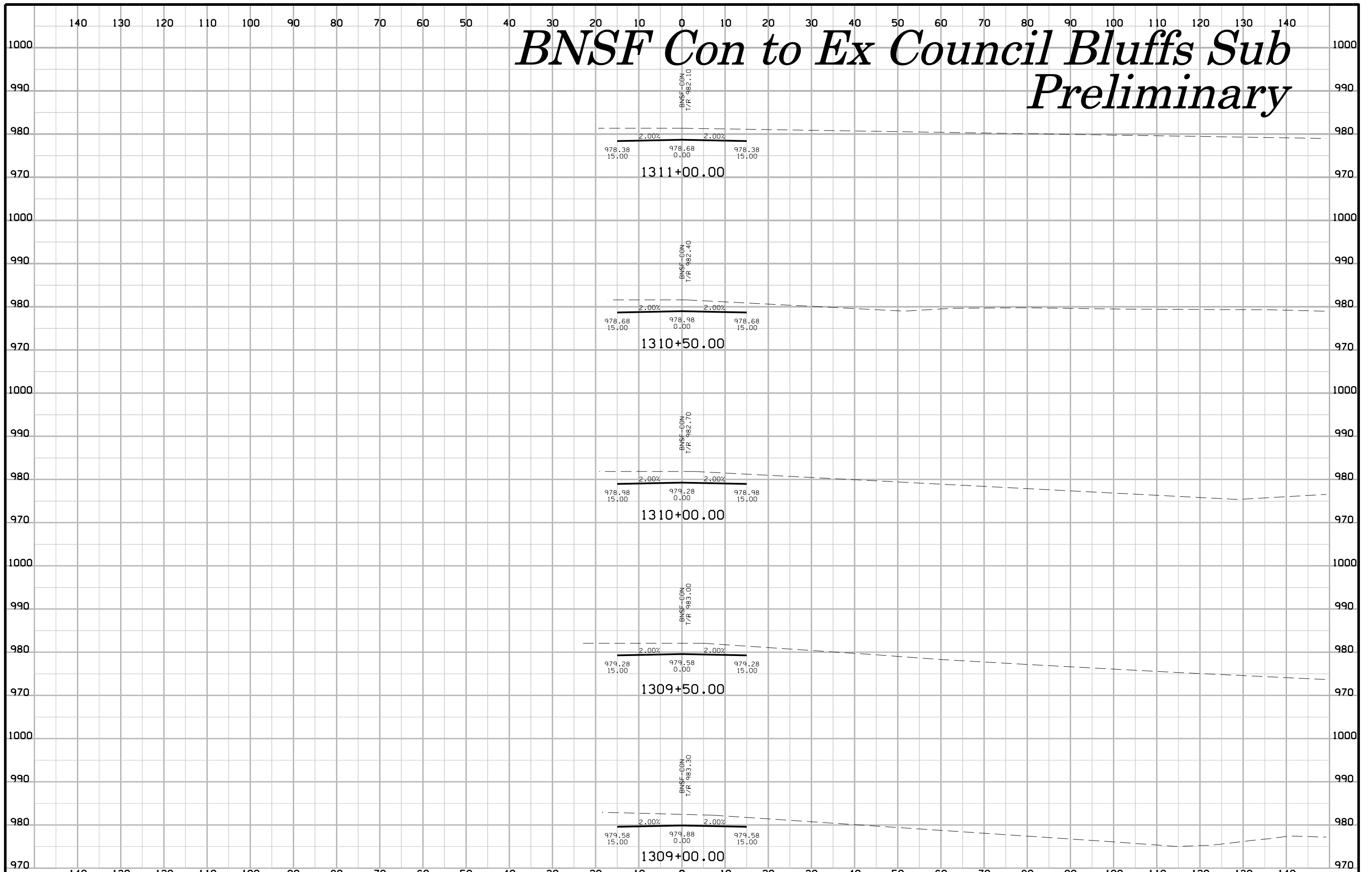


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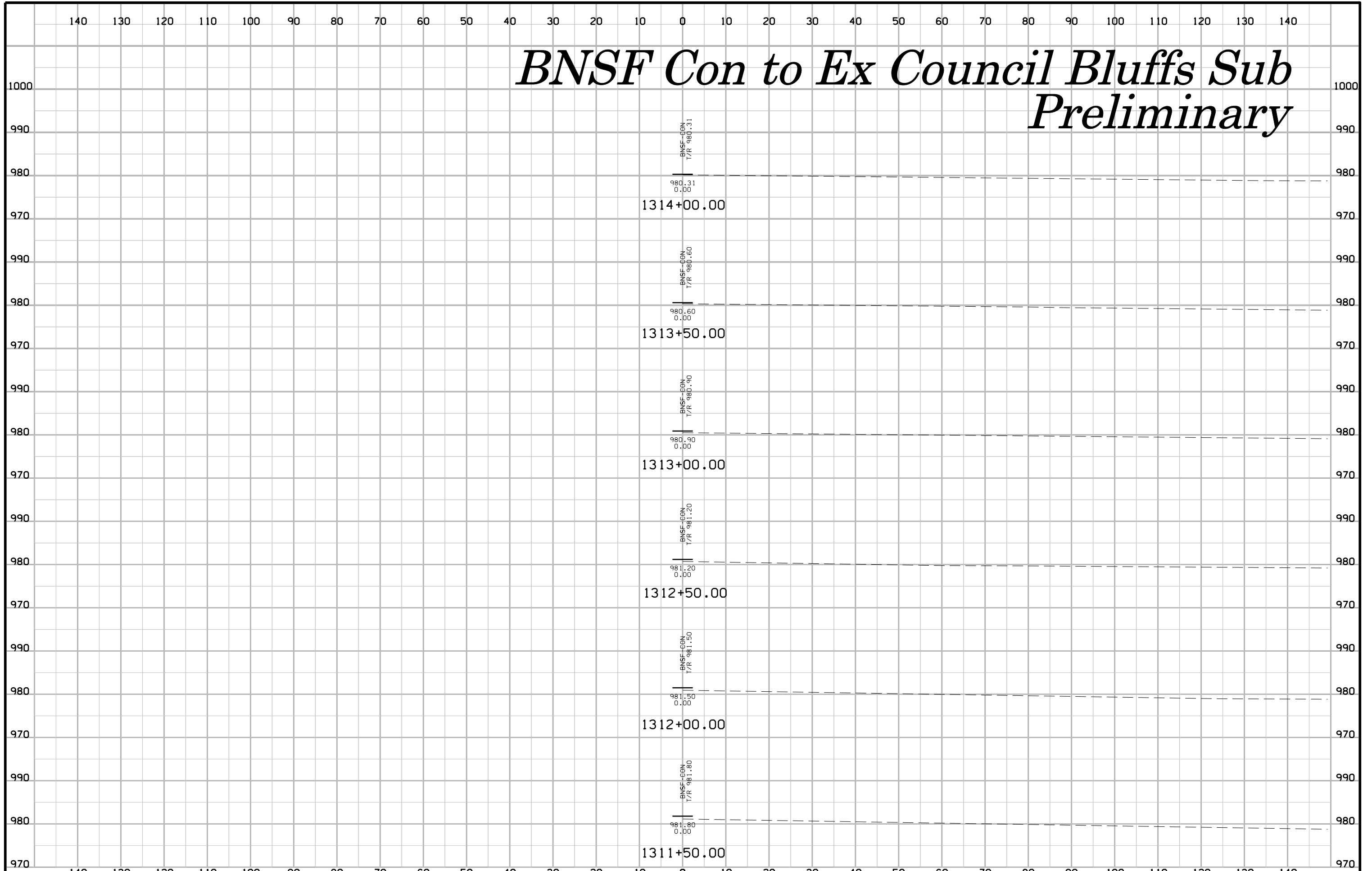


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Preliminary

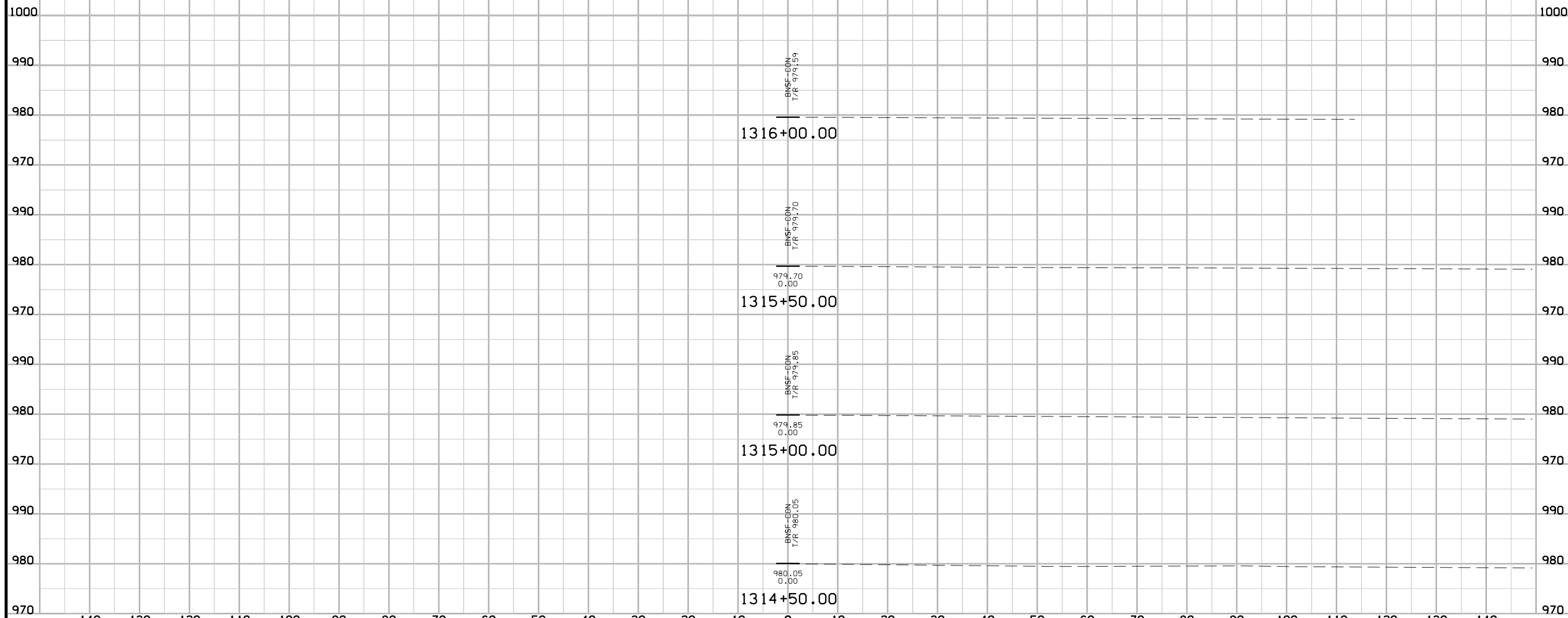


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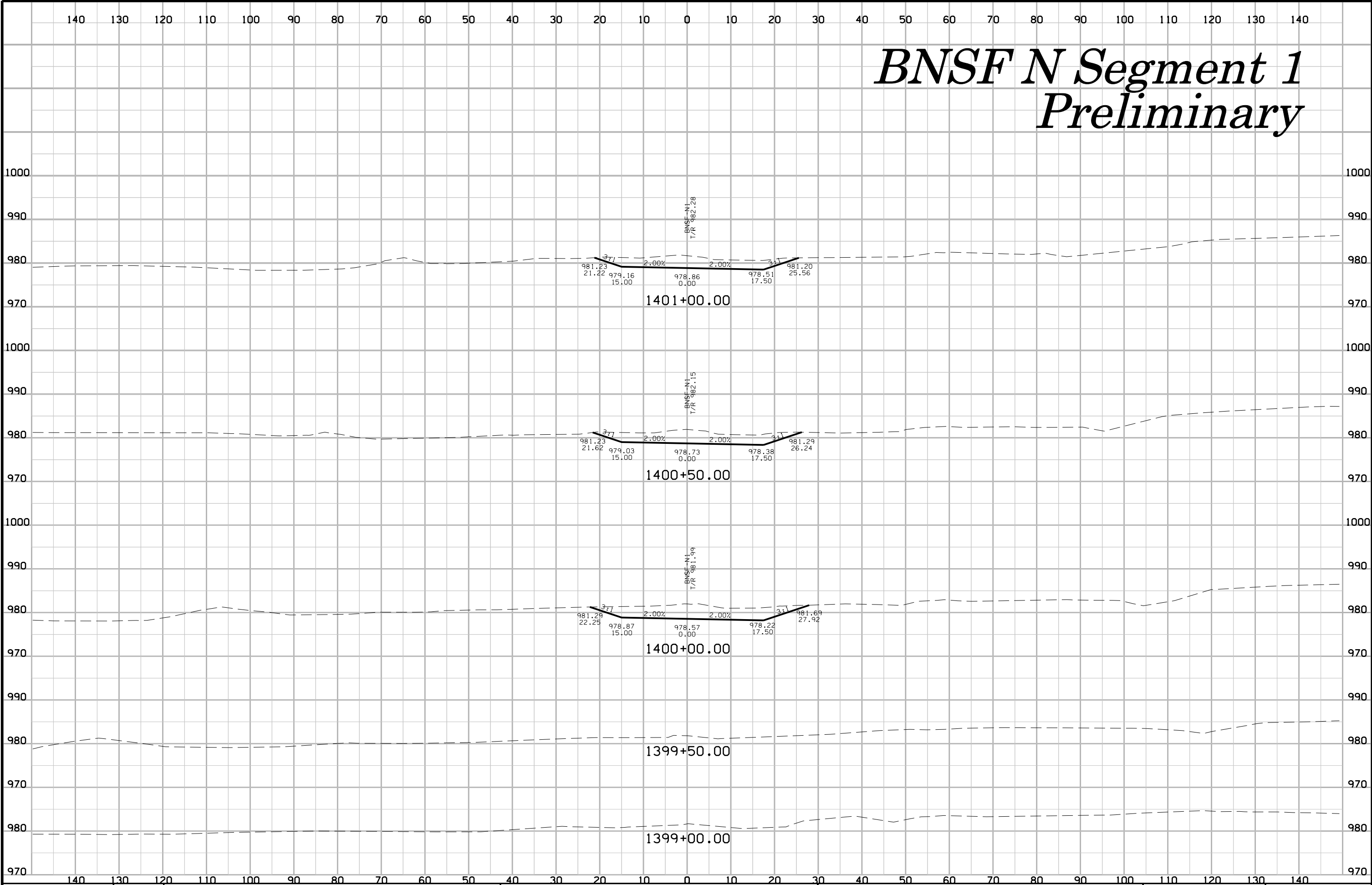


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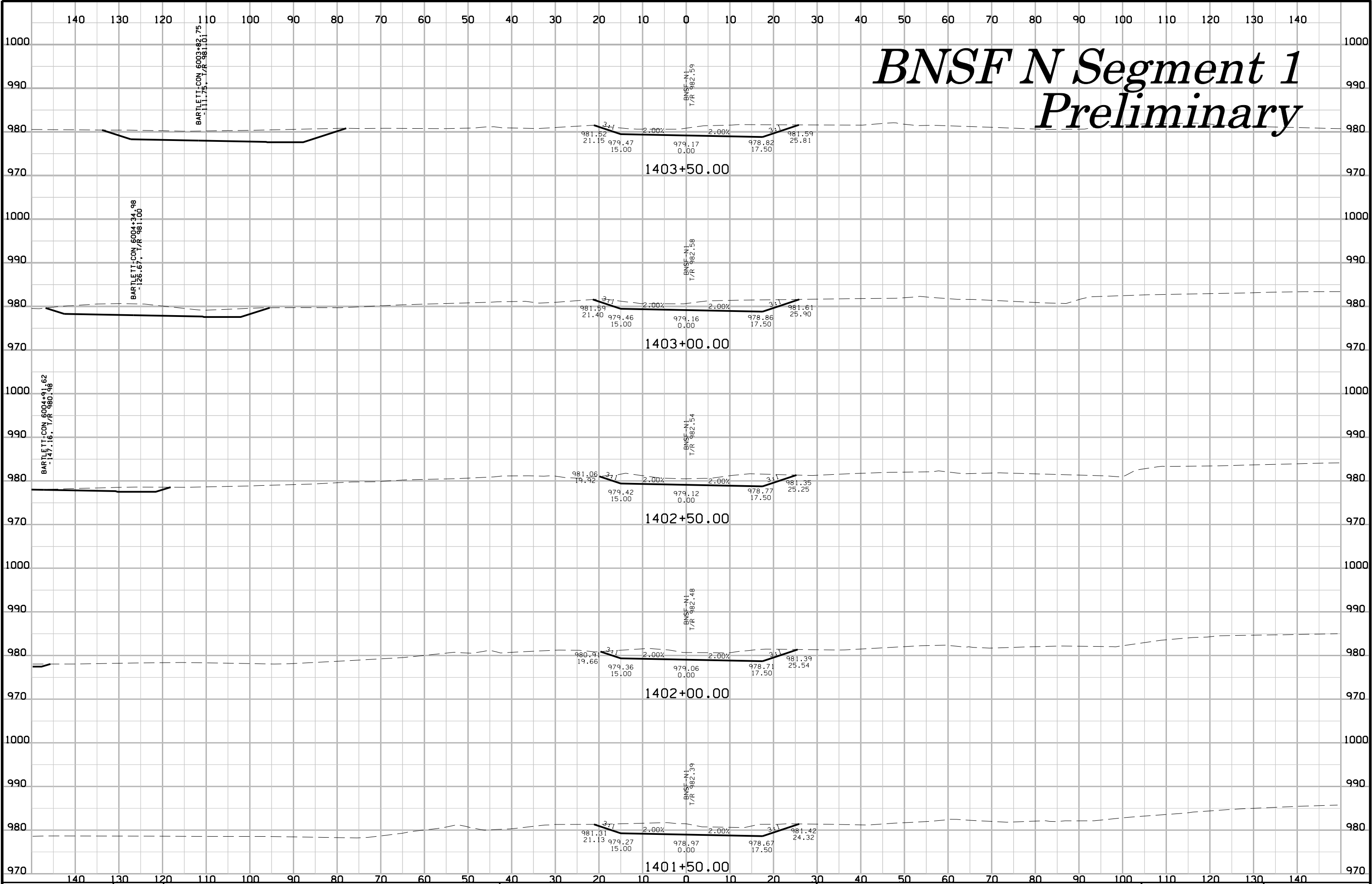
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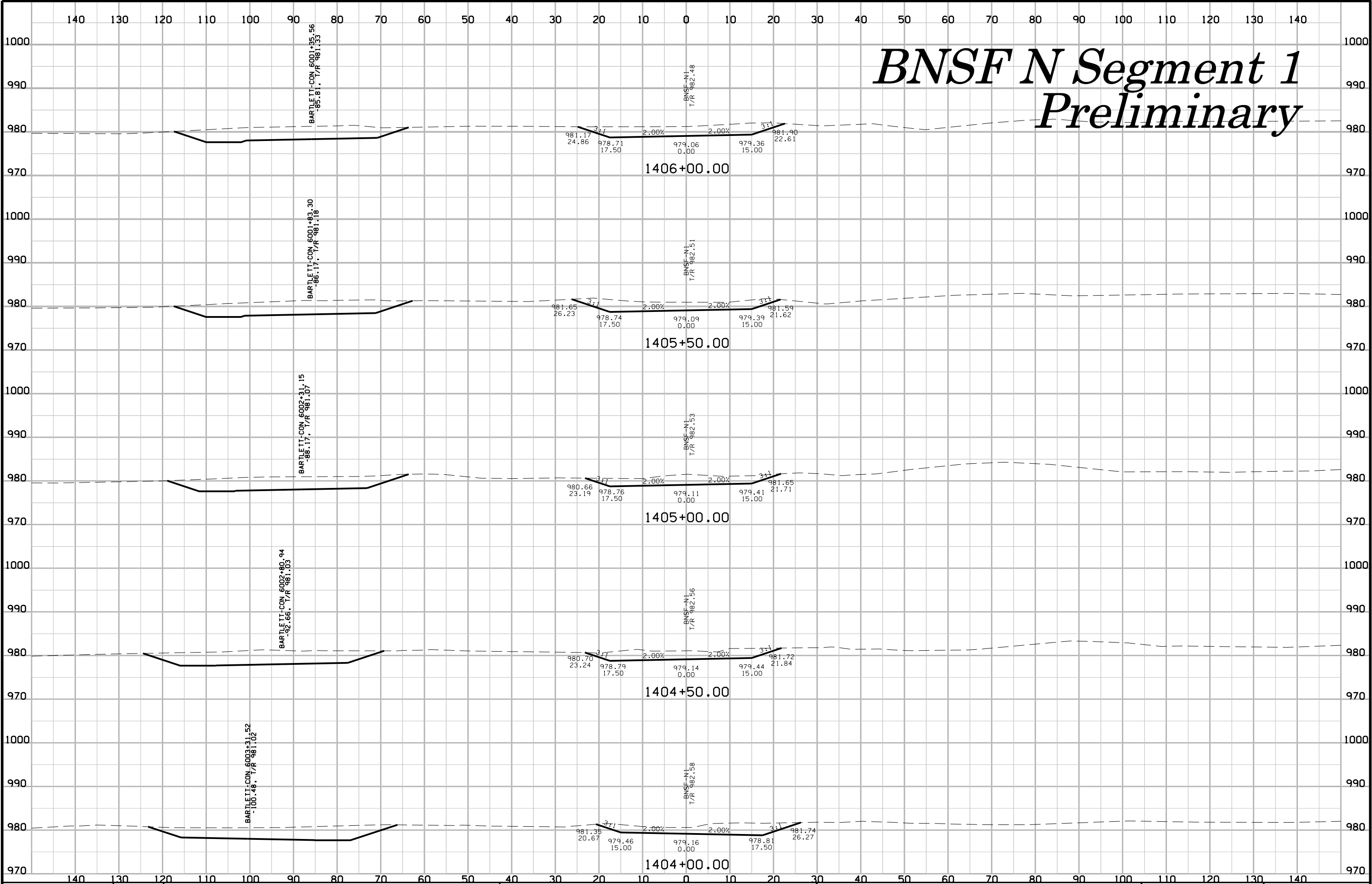
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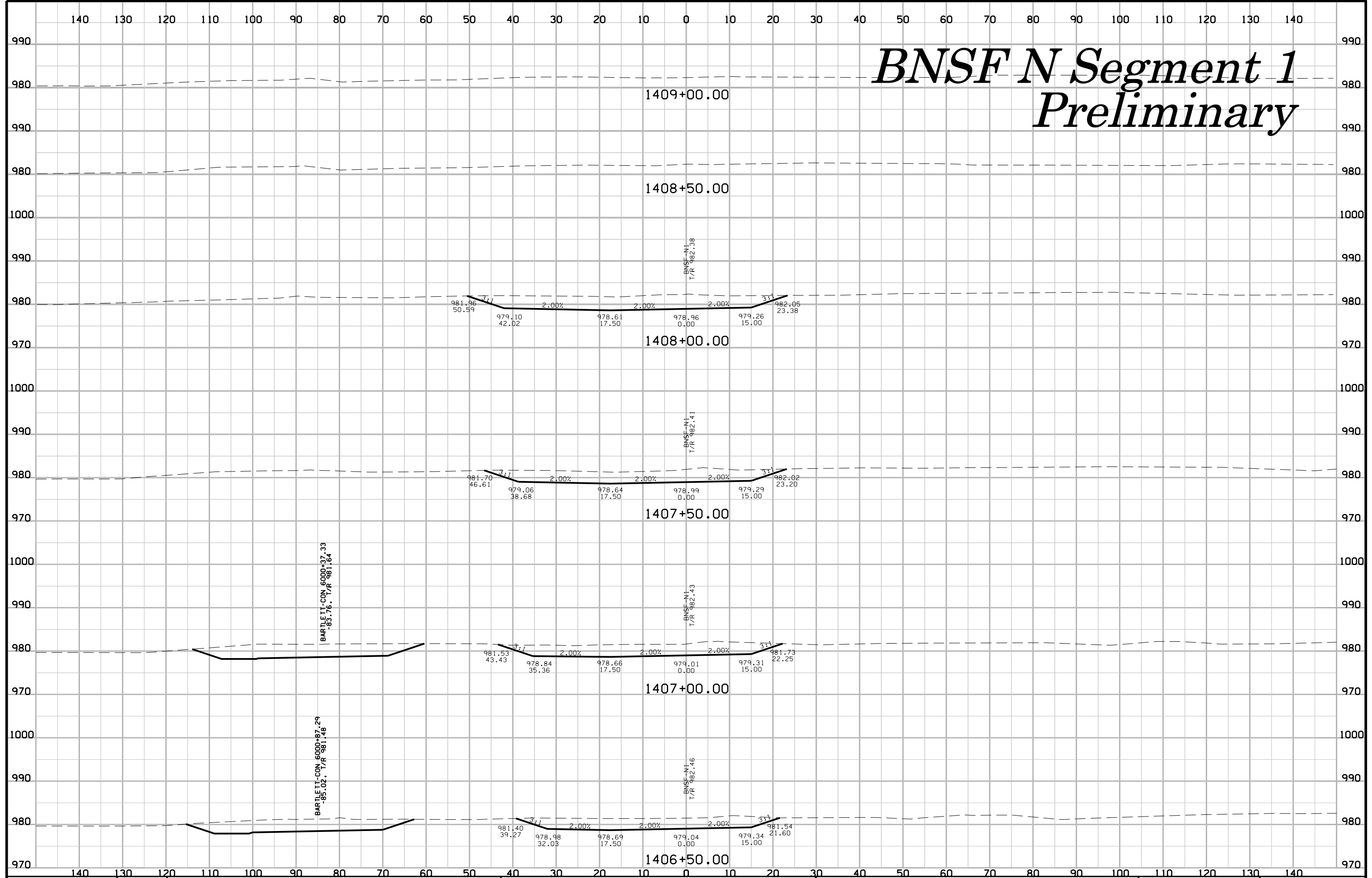
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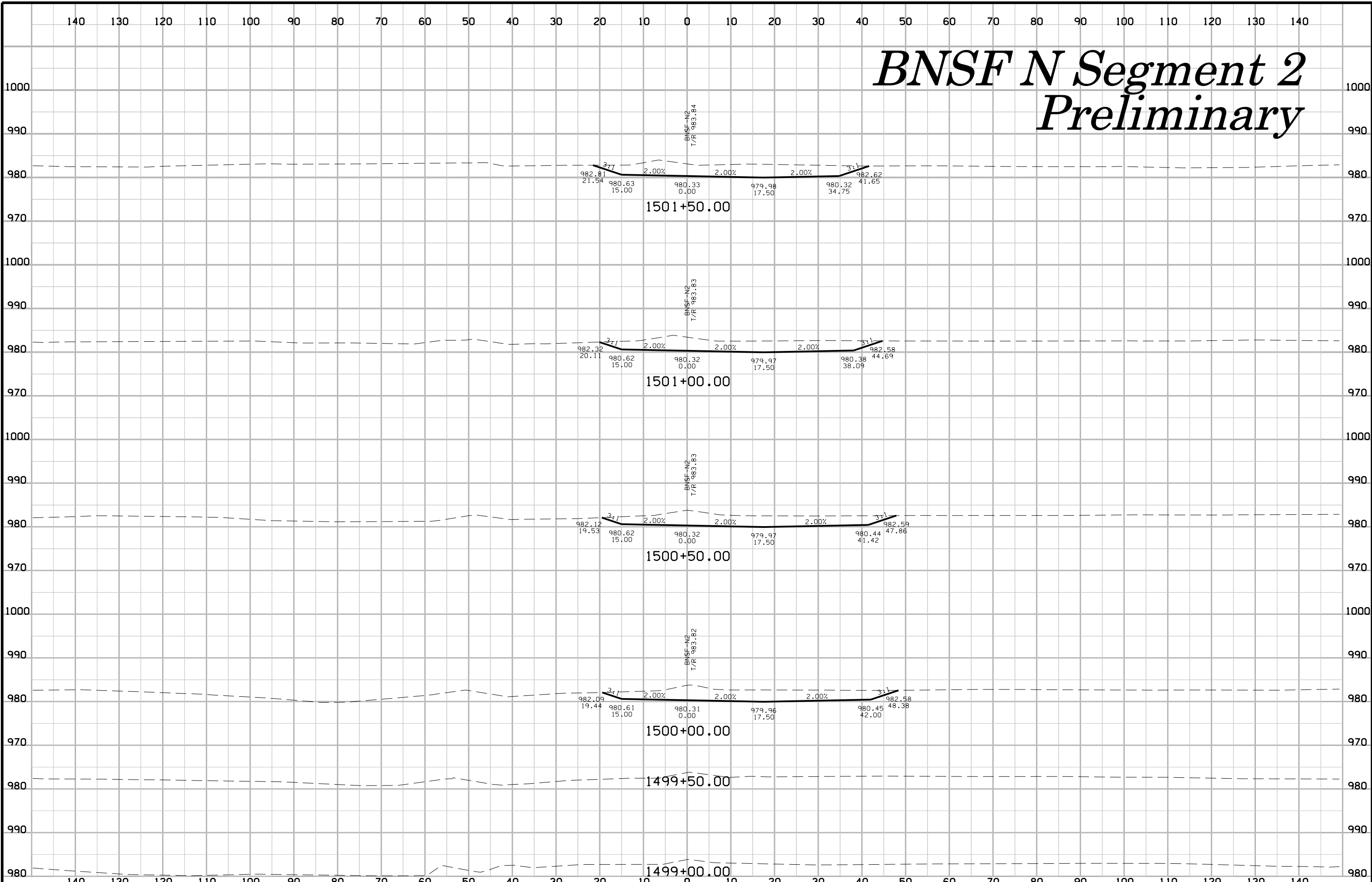
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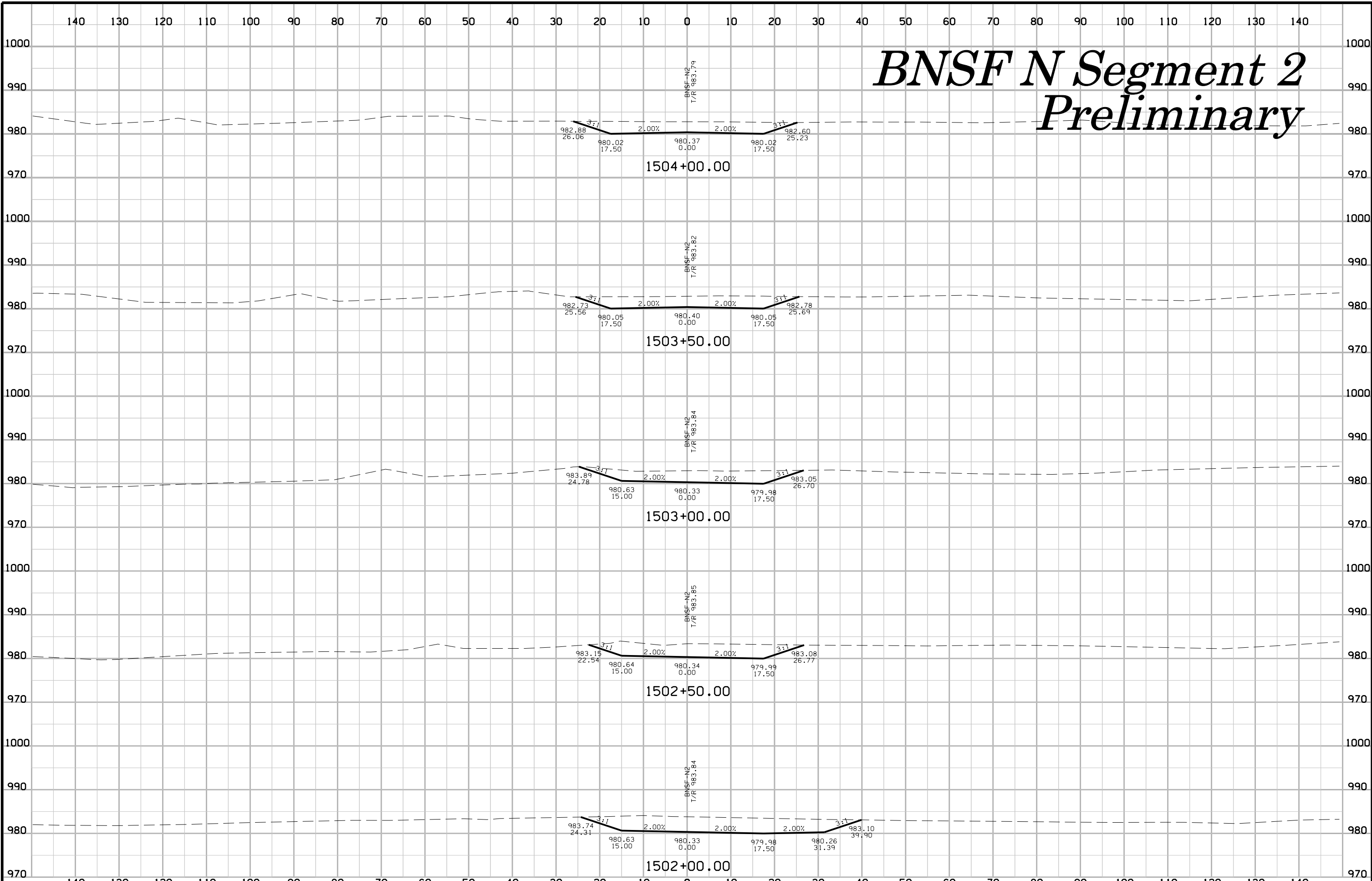
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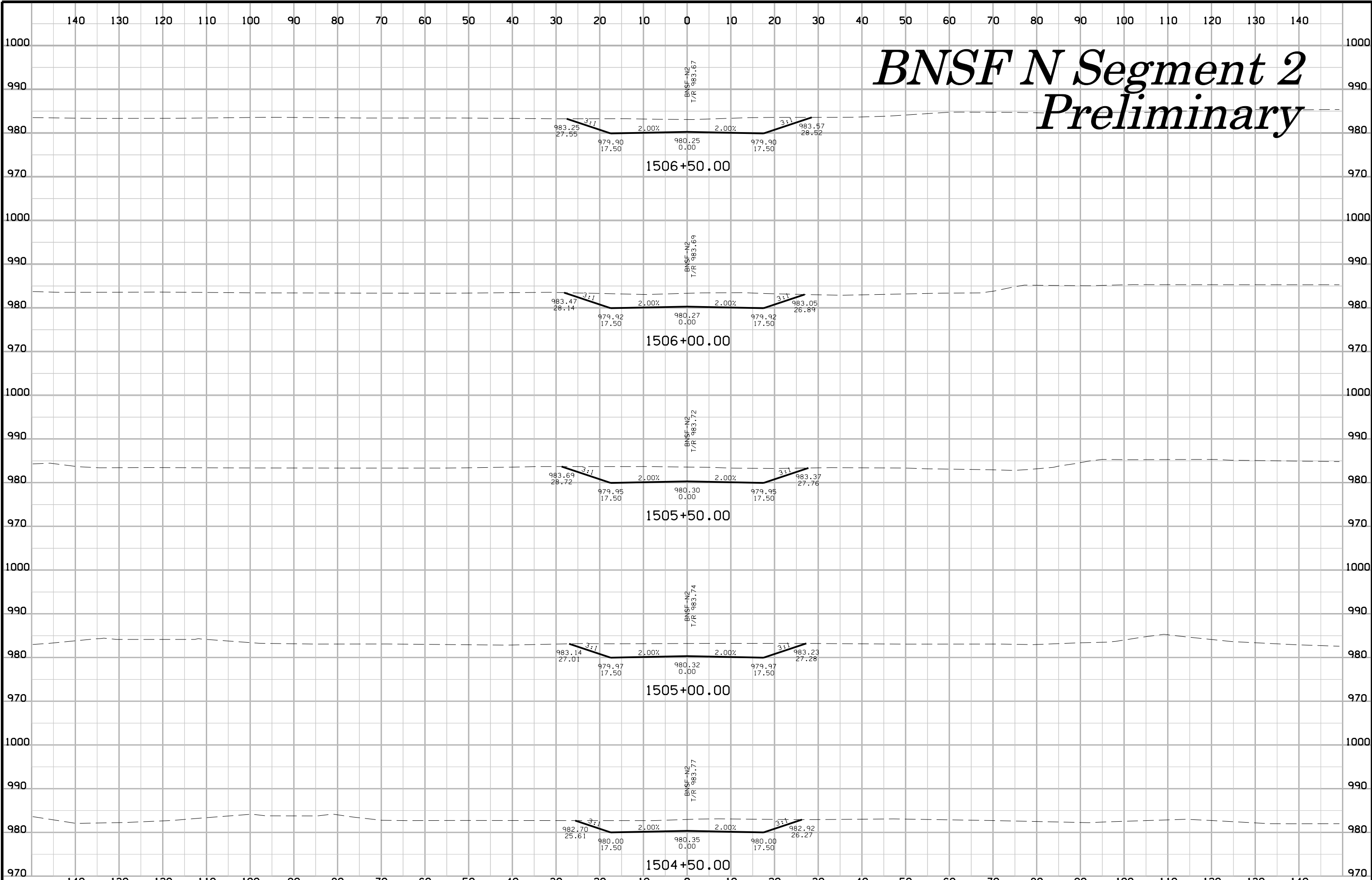
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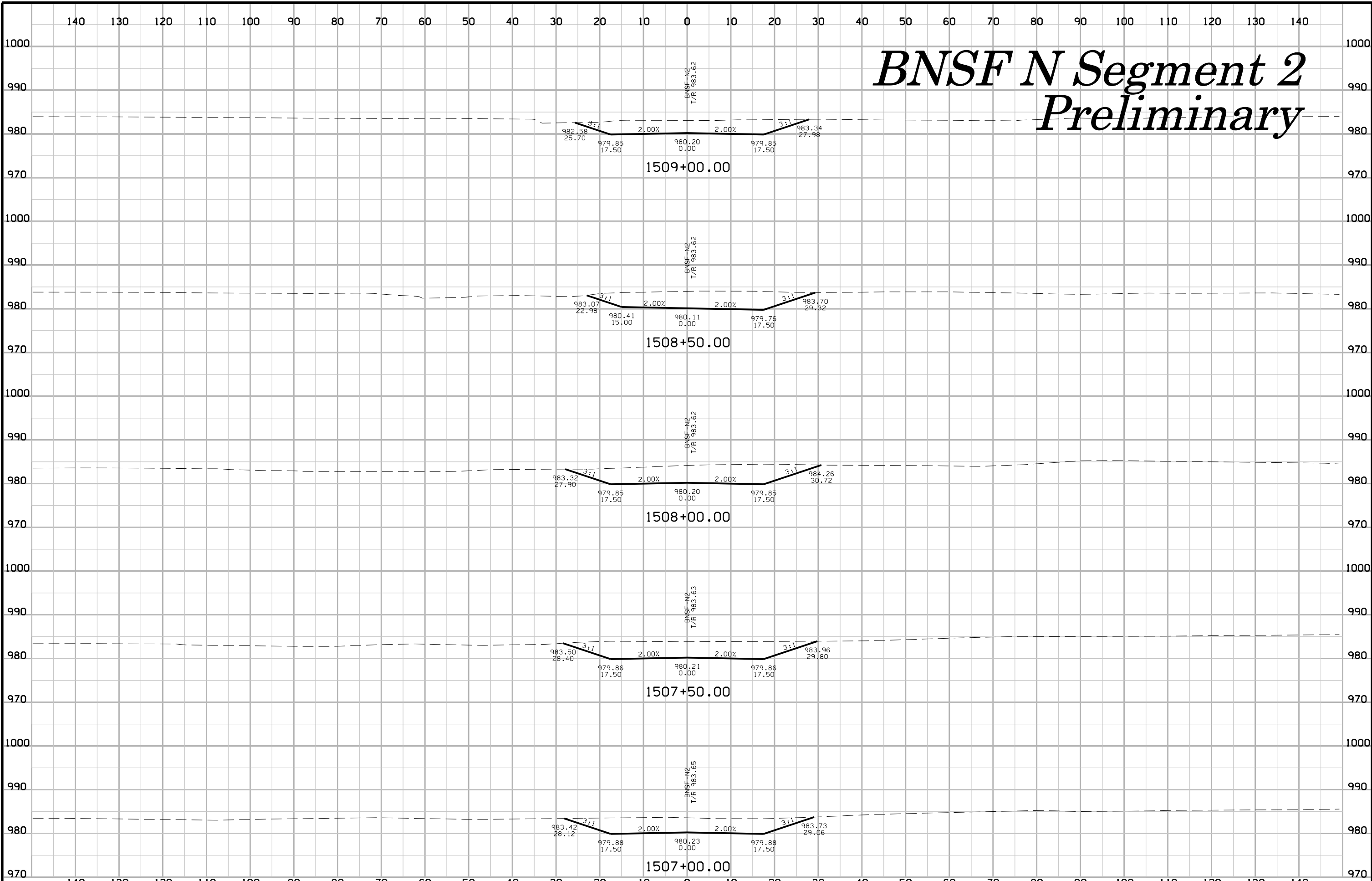
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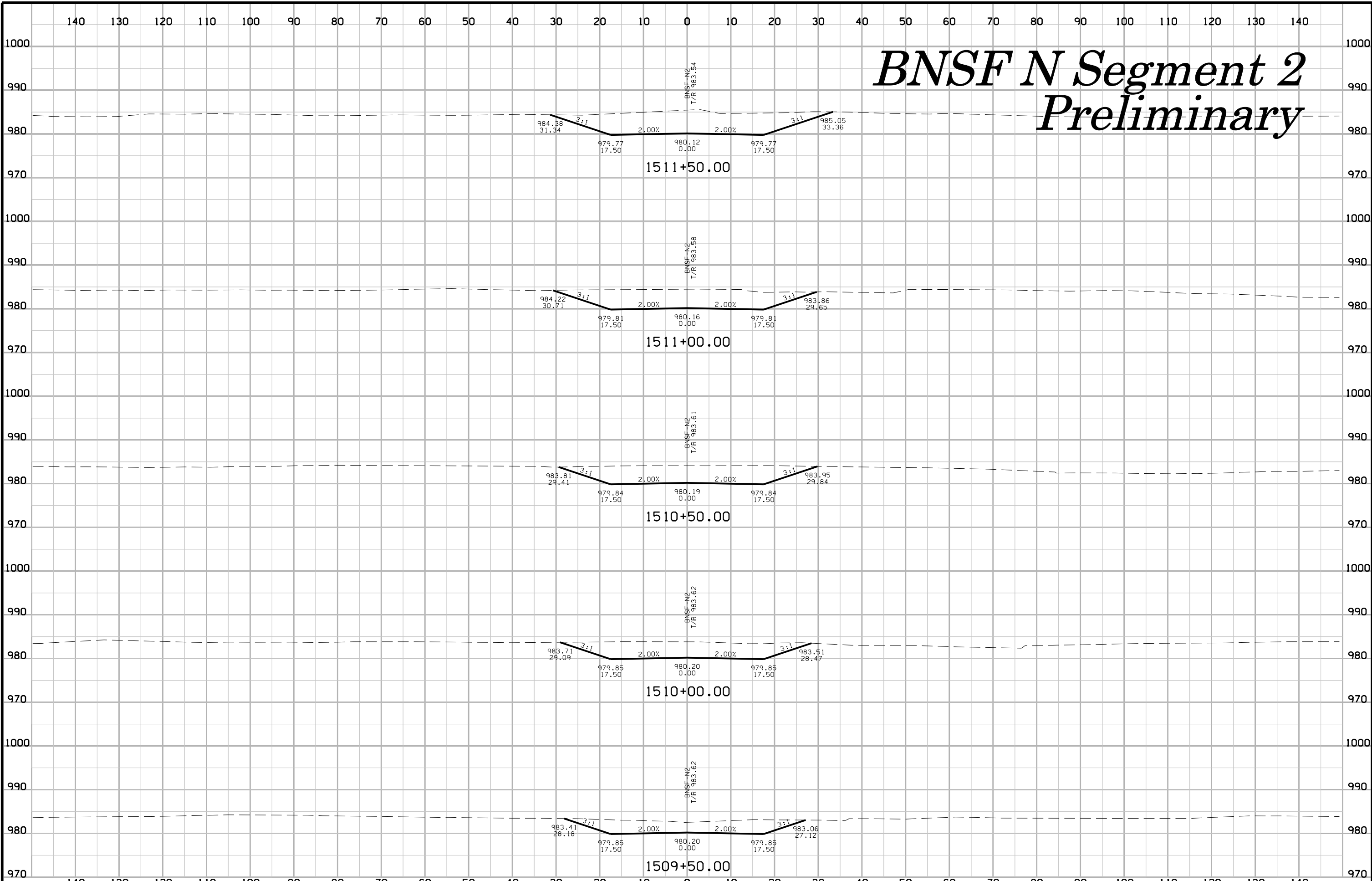
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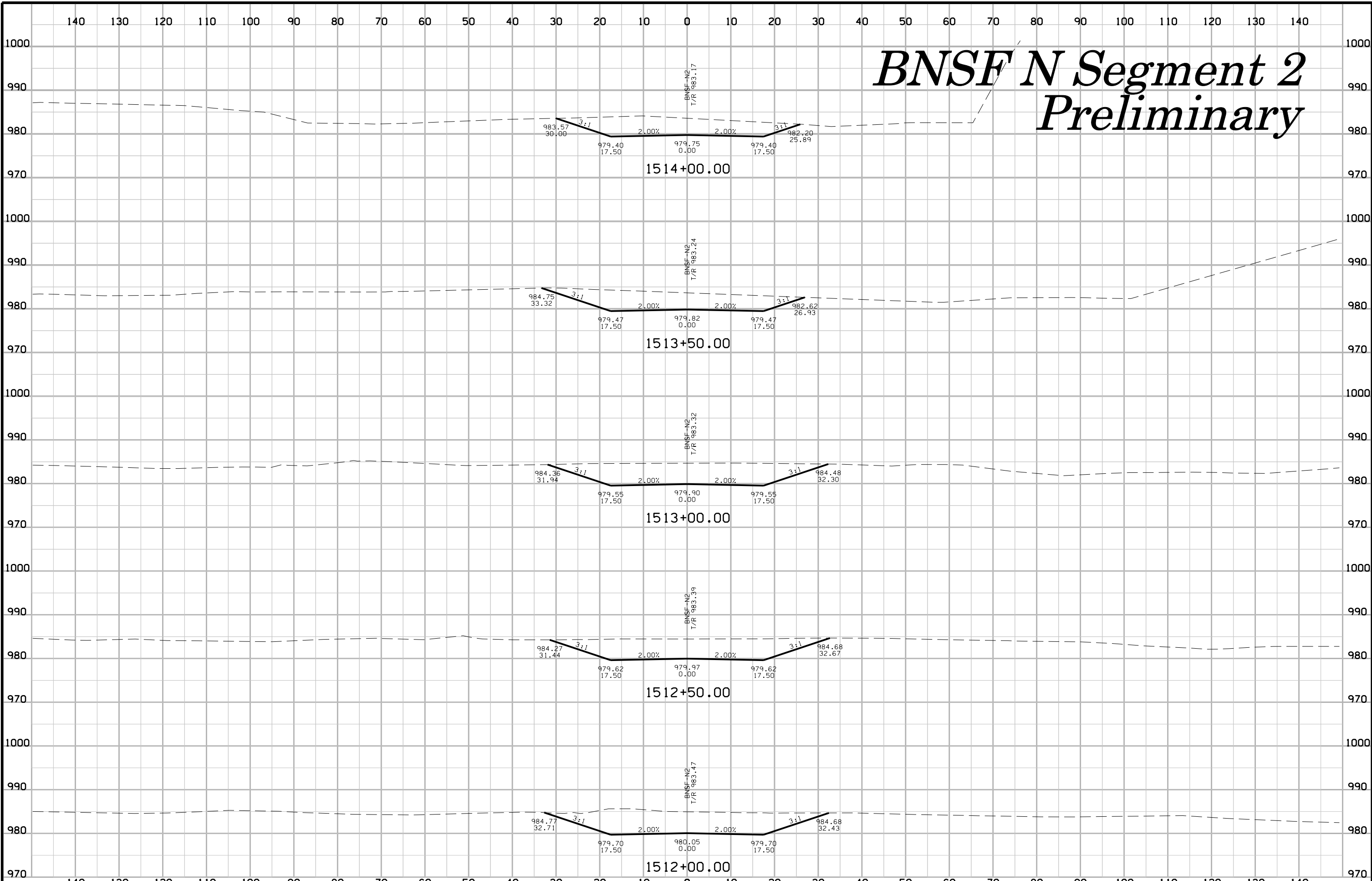
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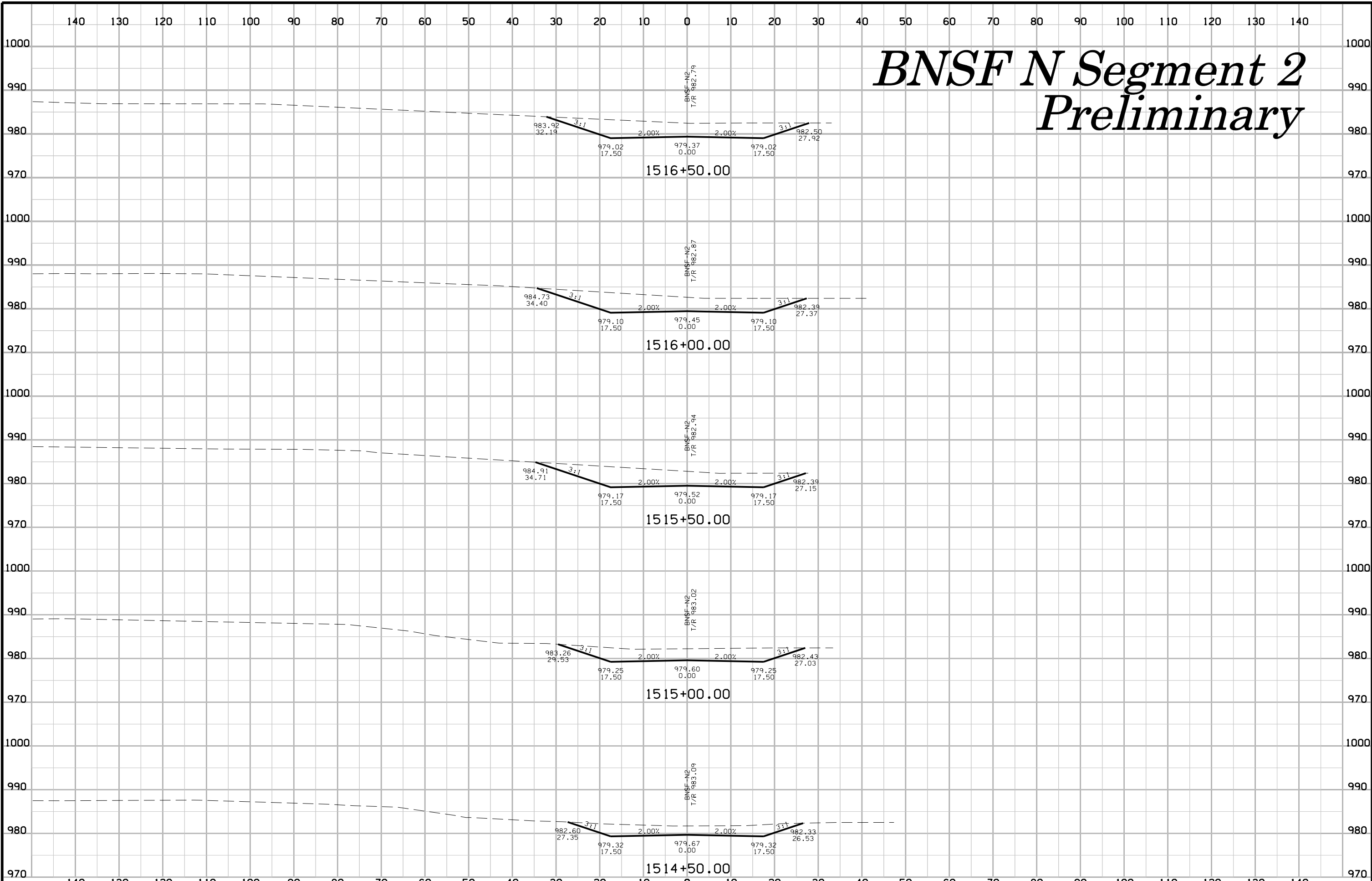
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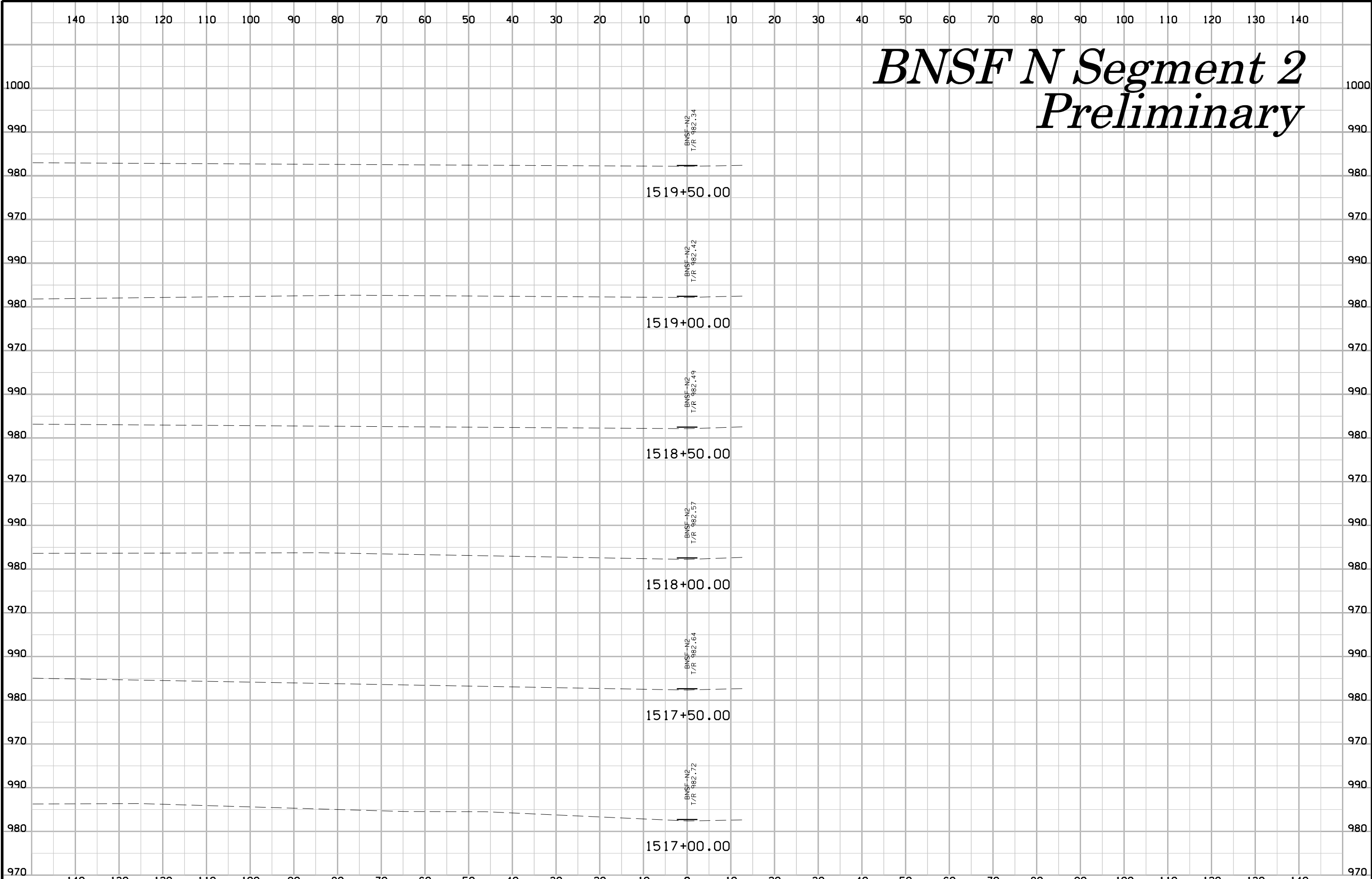
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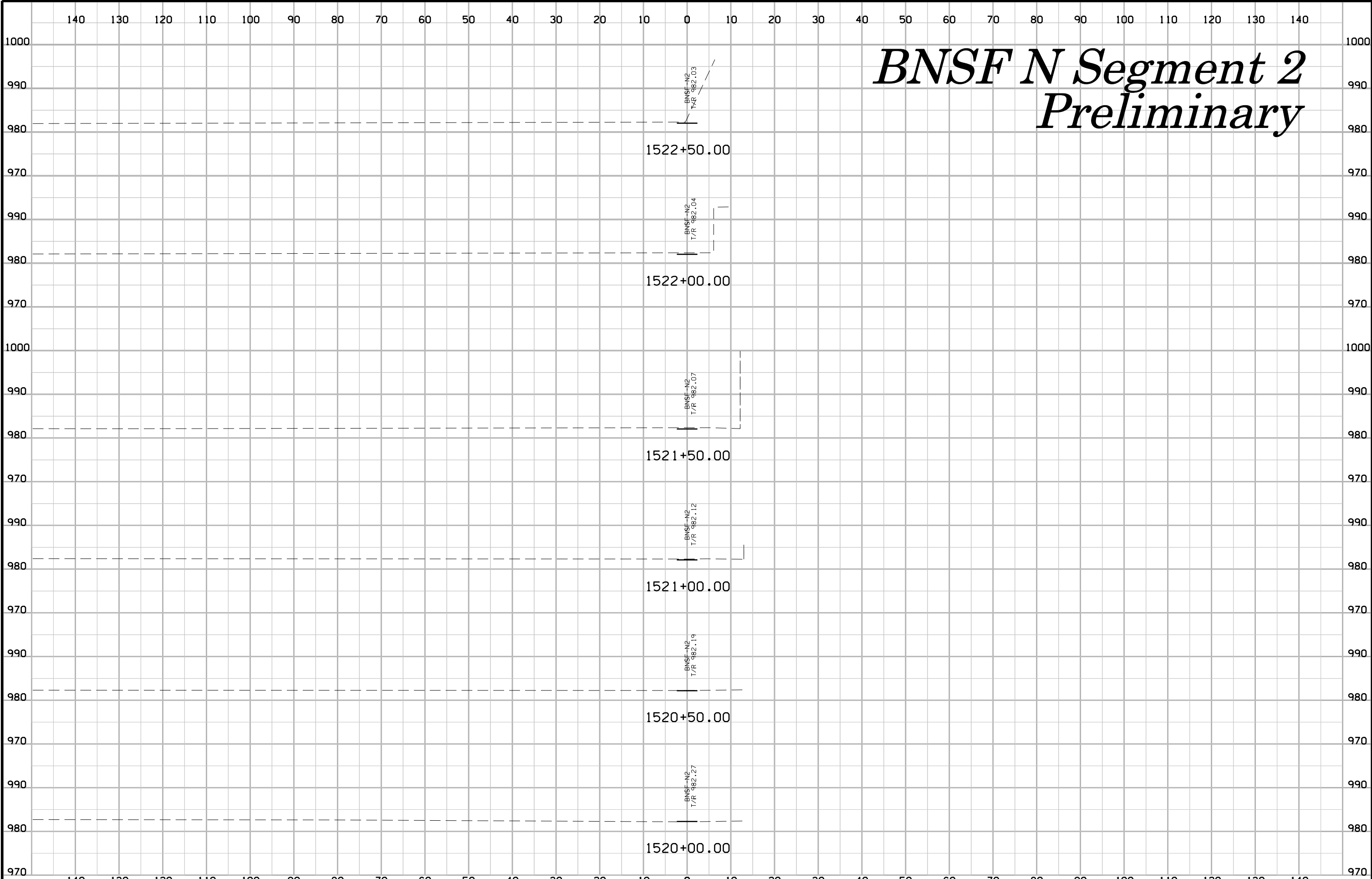
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BNSF N Segment 2 Preliminary

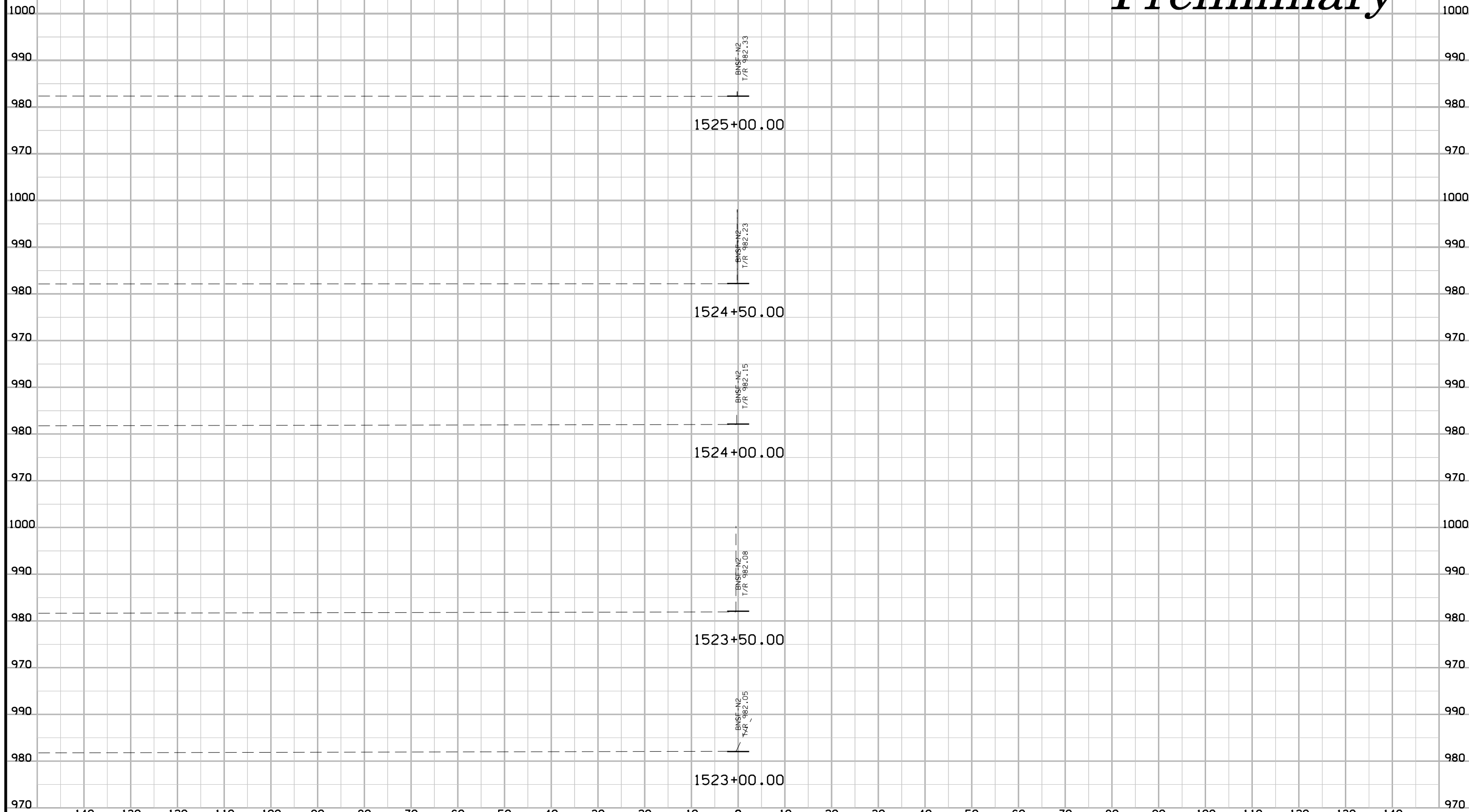


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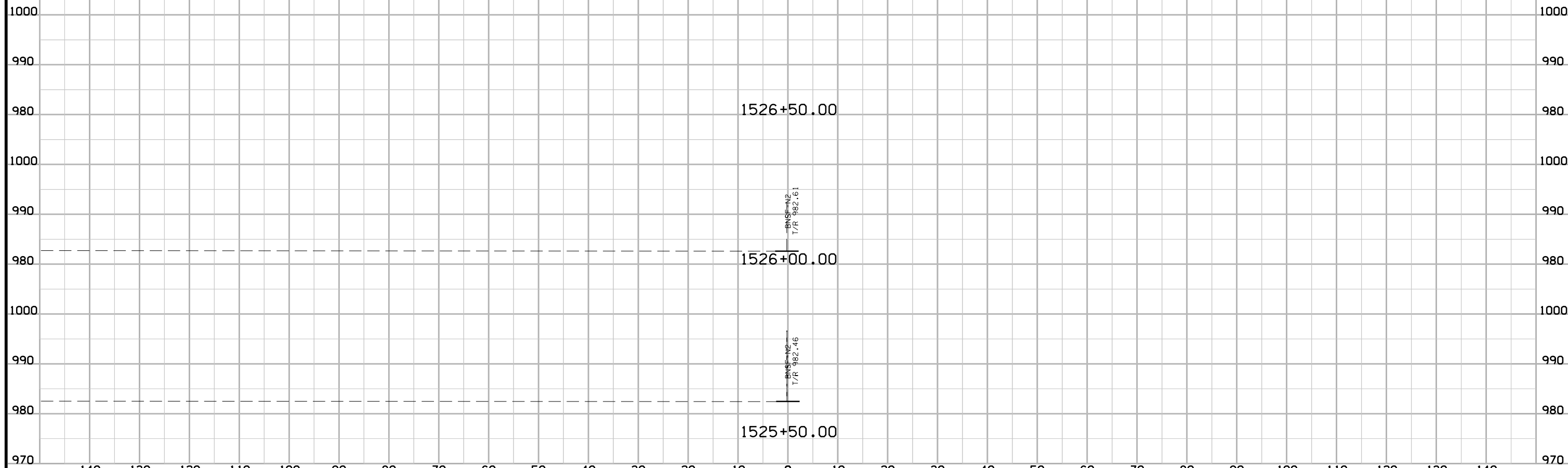
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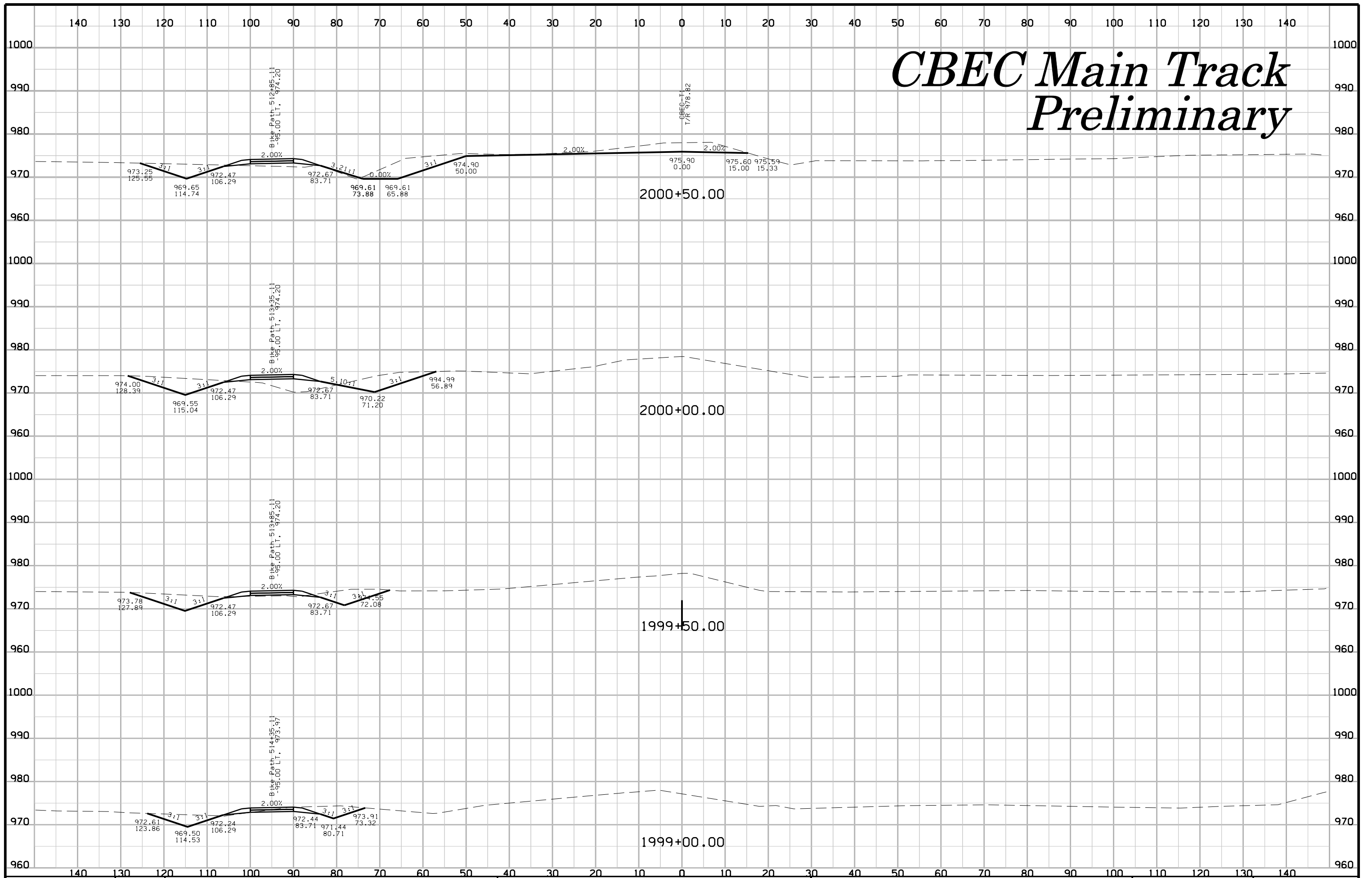


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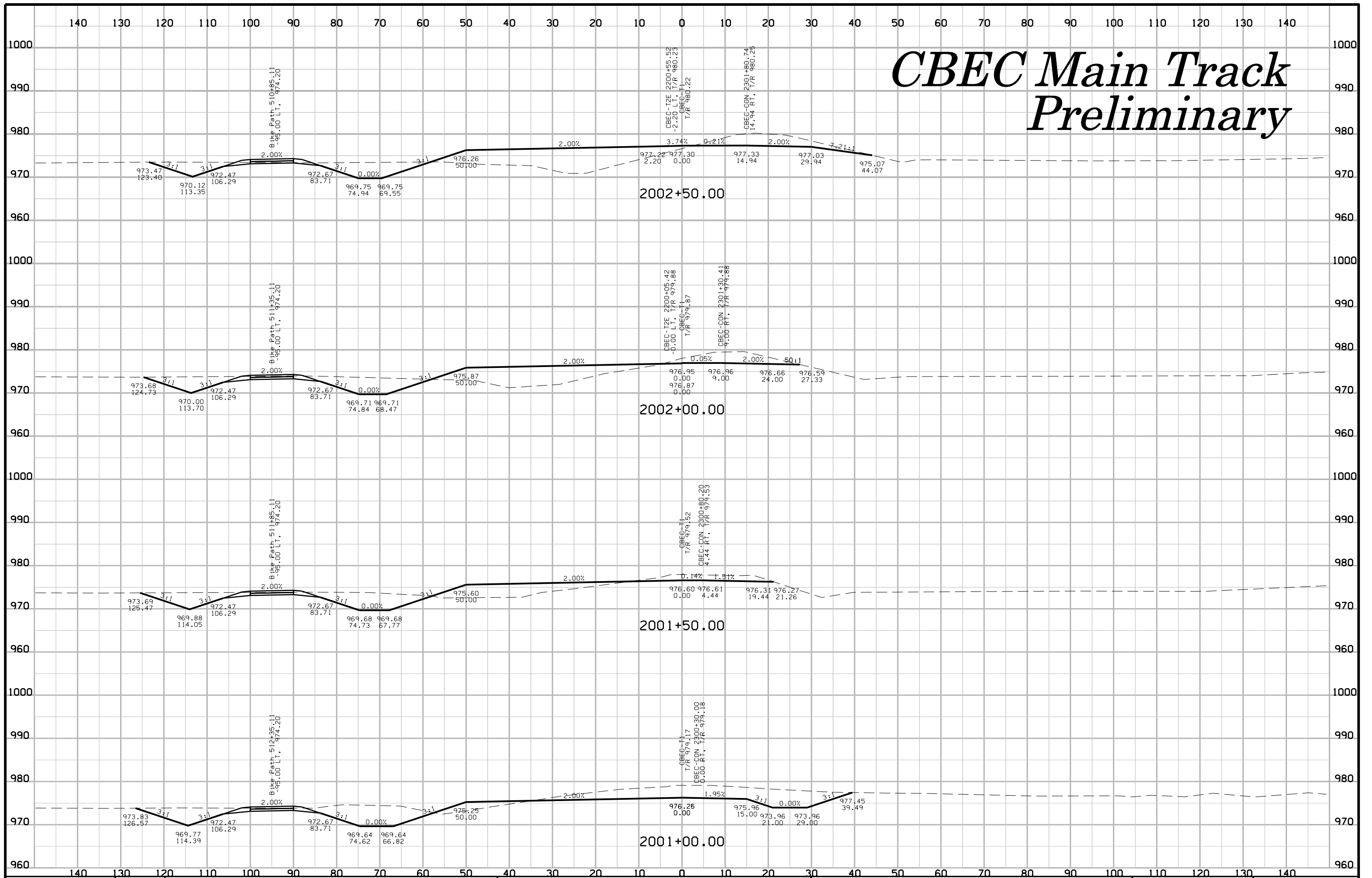
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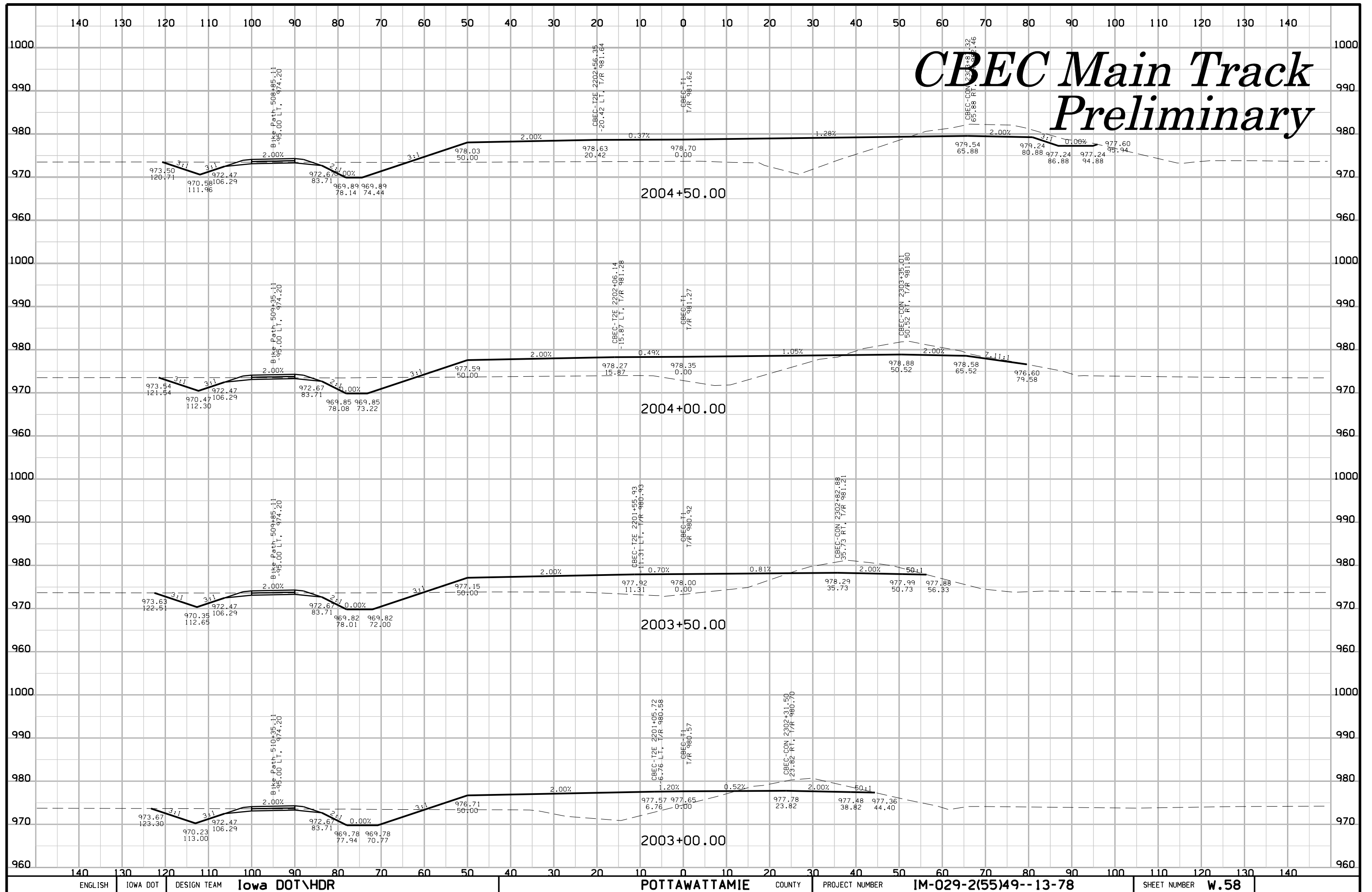
CBEC Main Track Preliminary



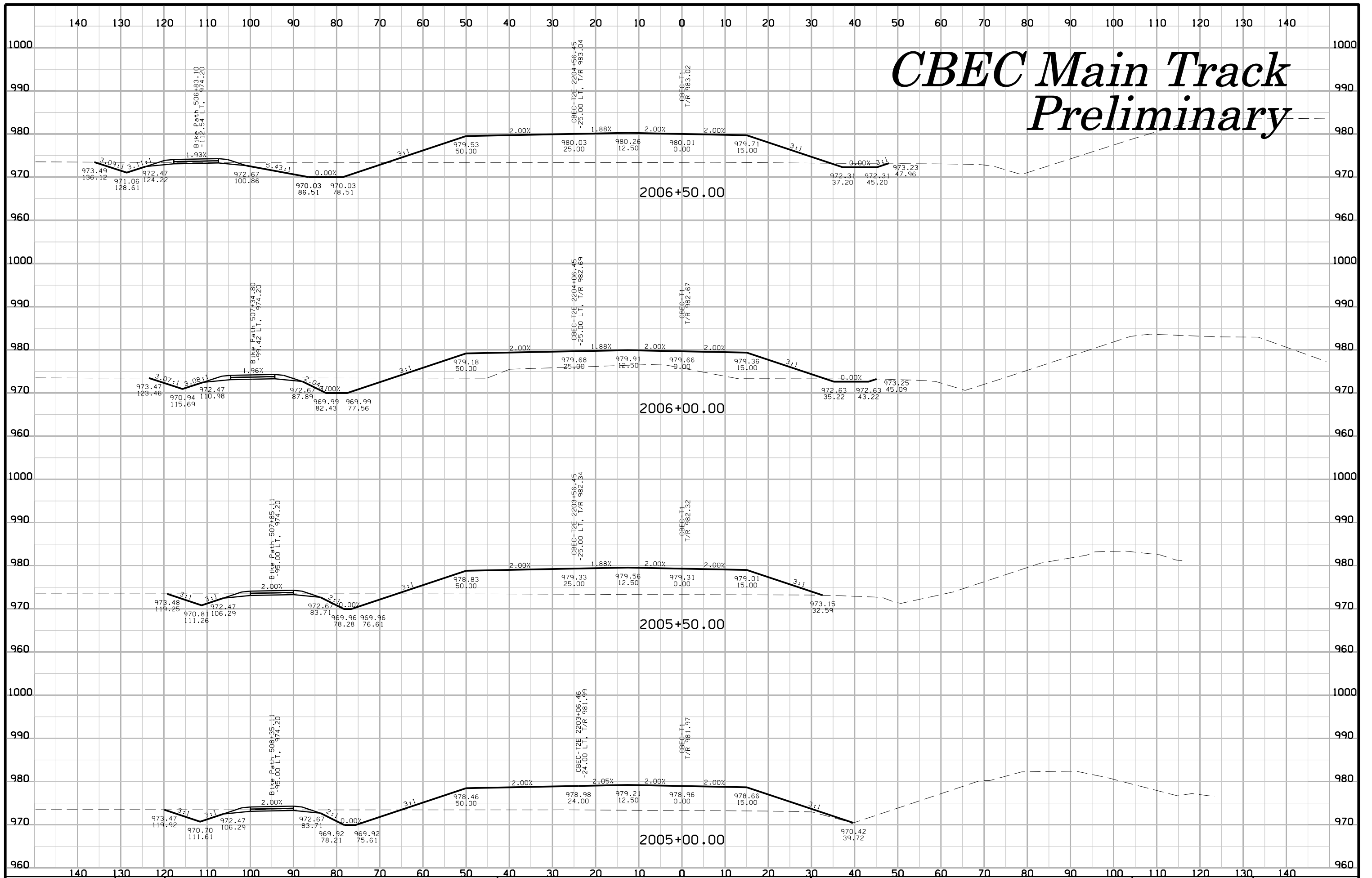
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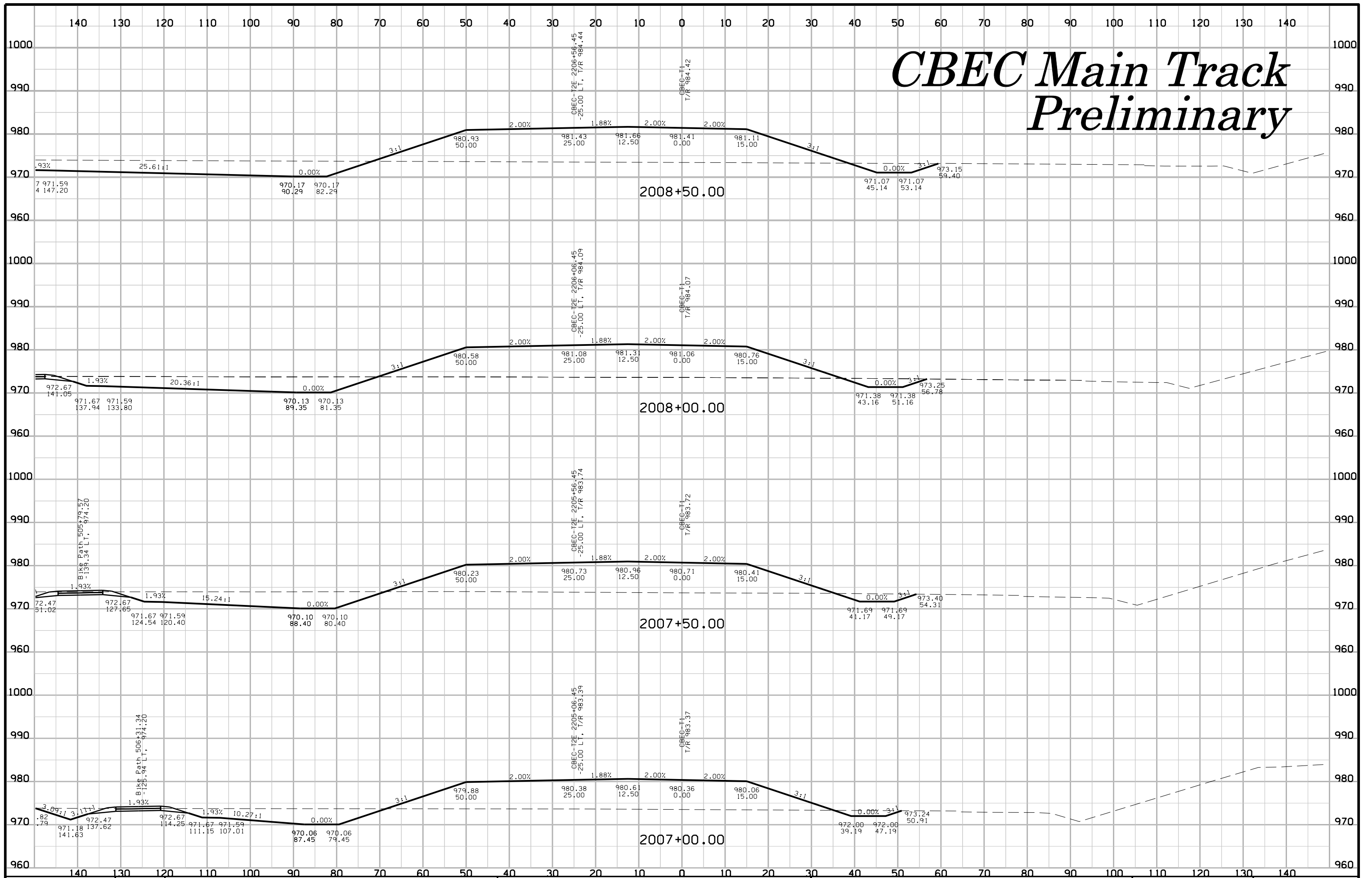
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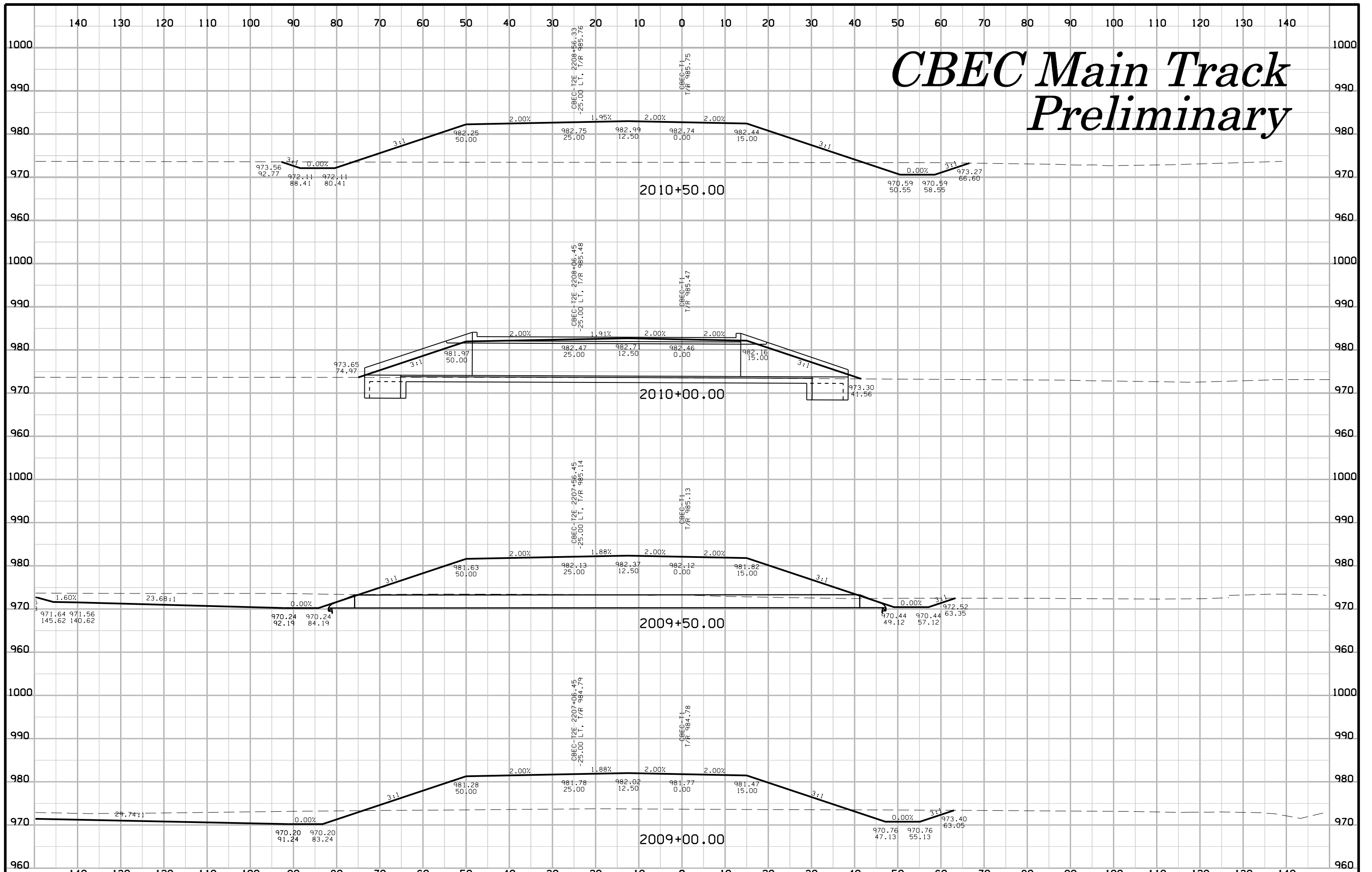
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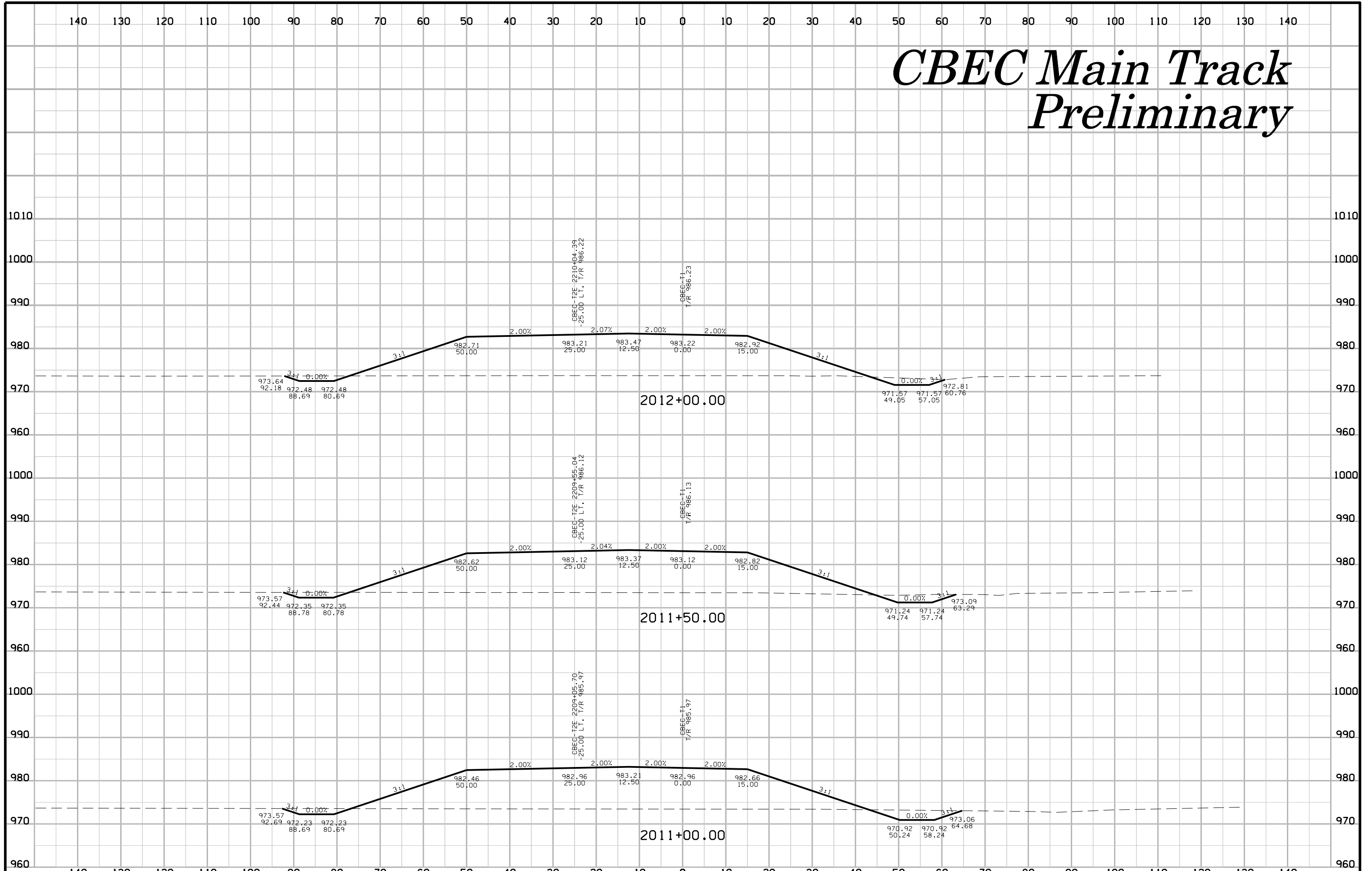
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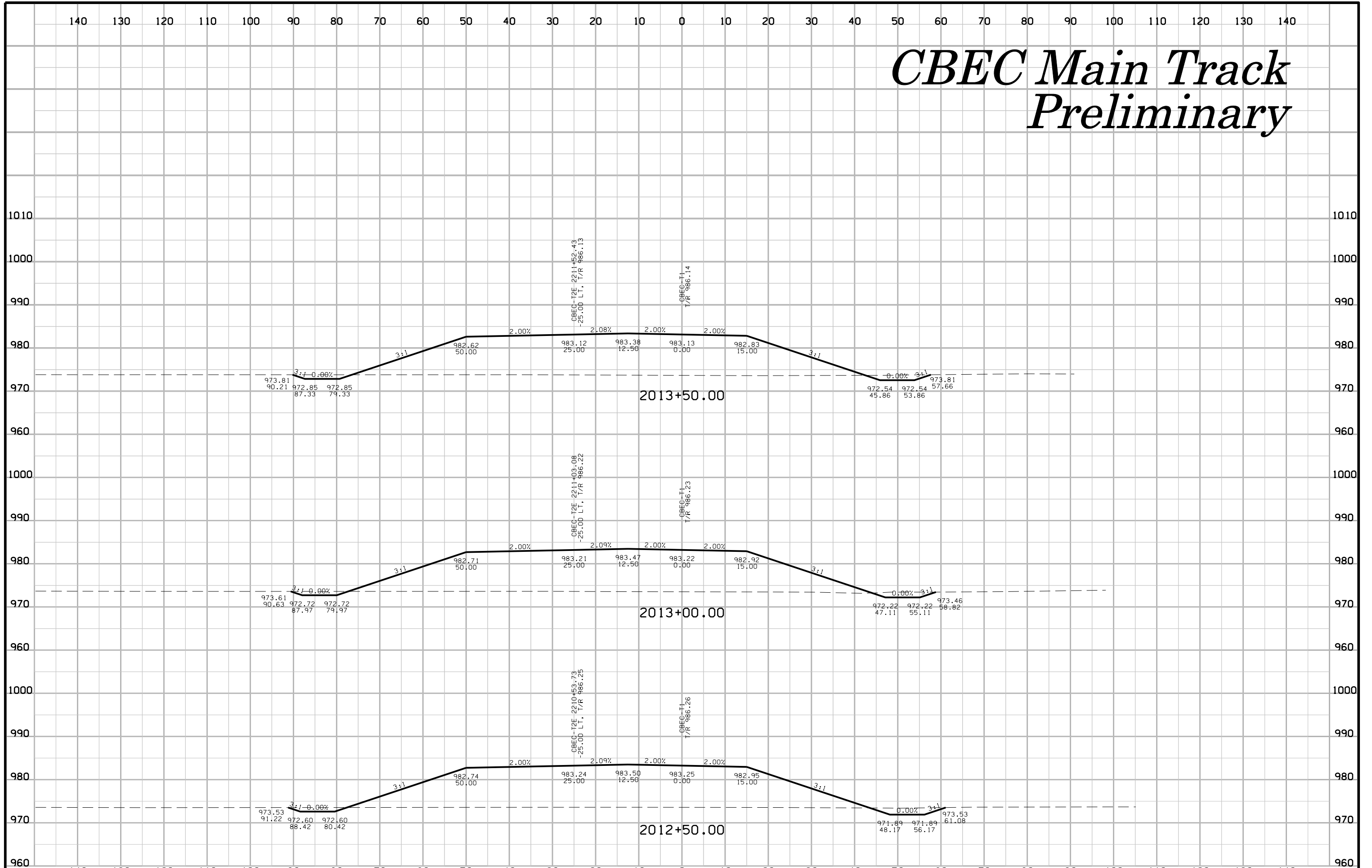
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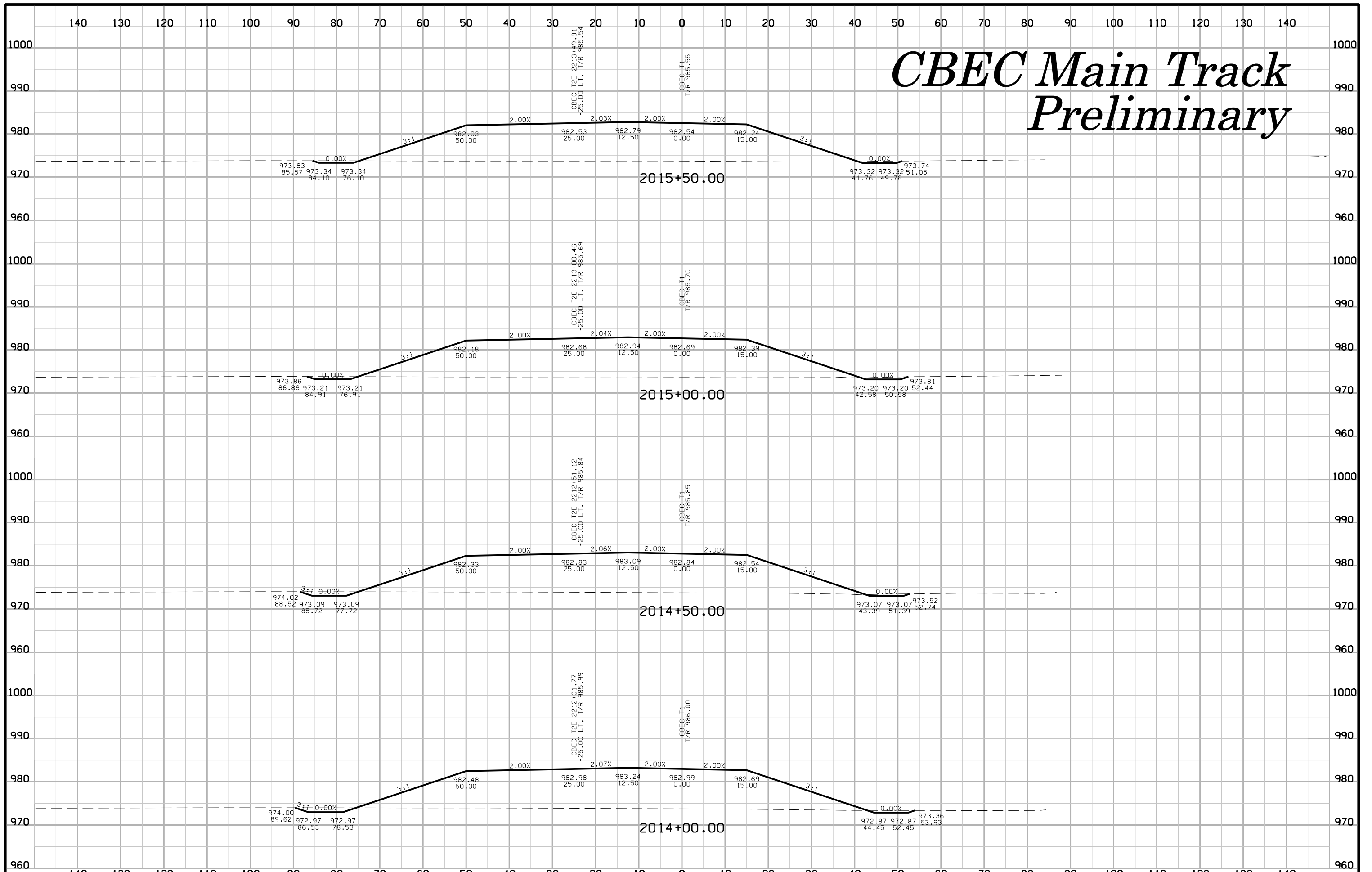
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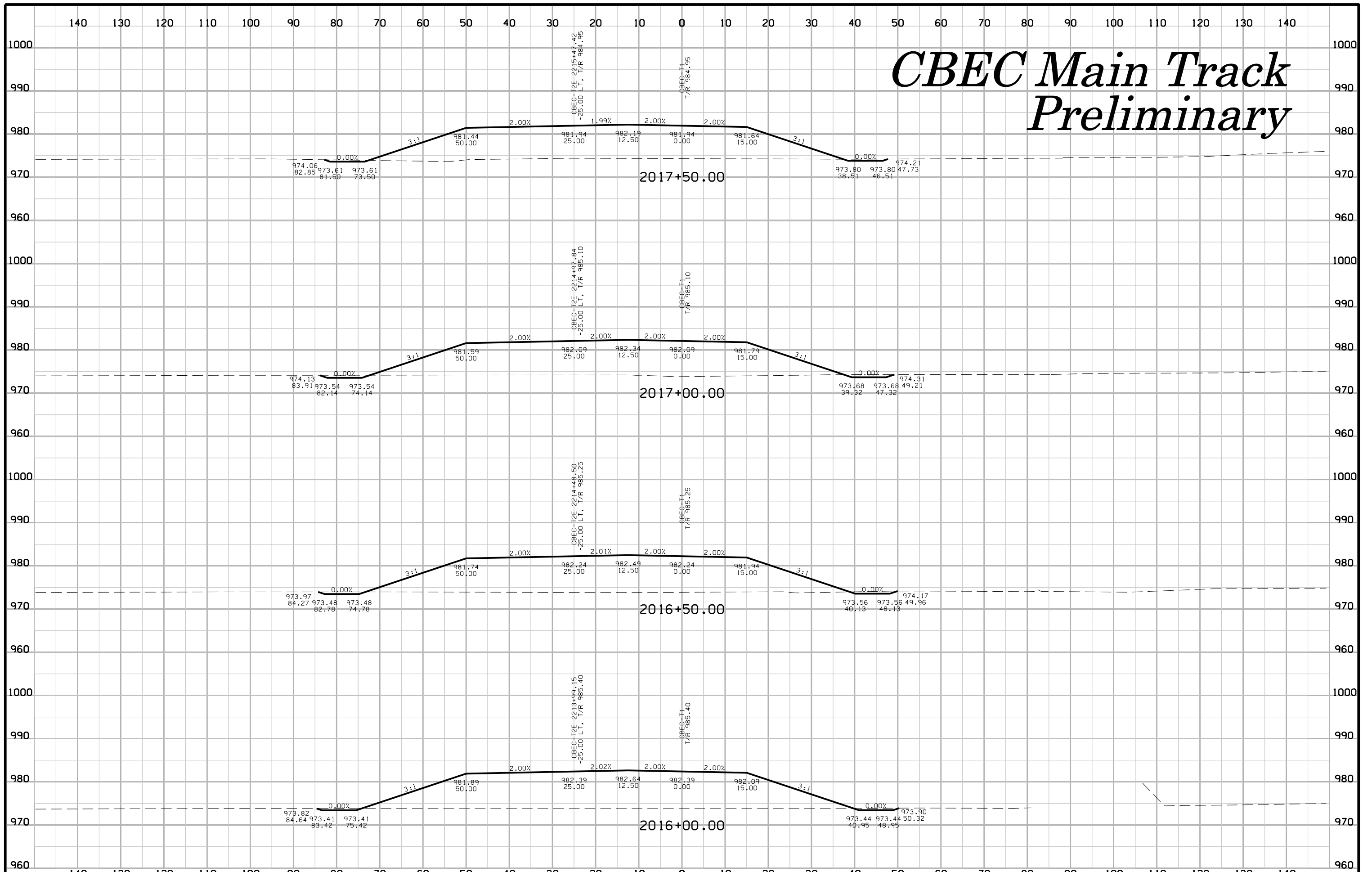
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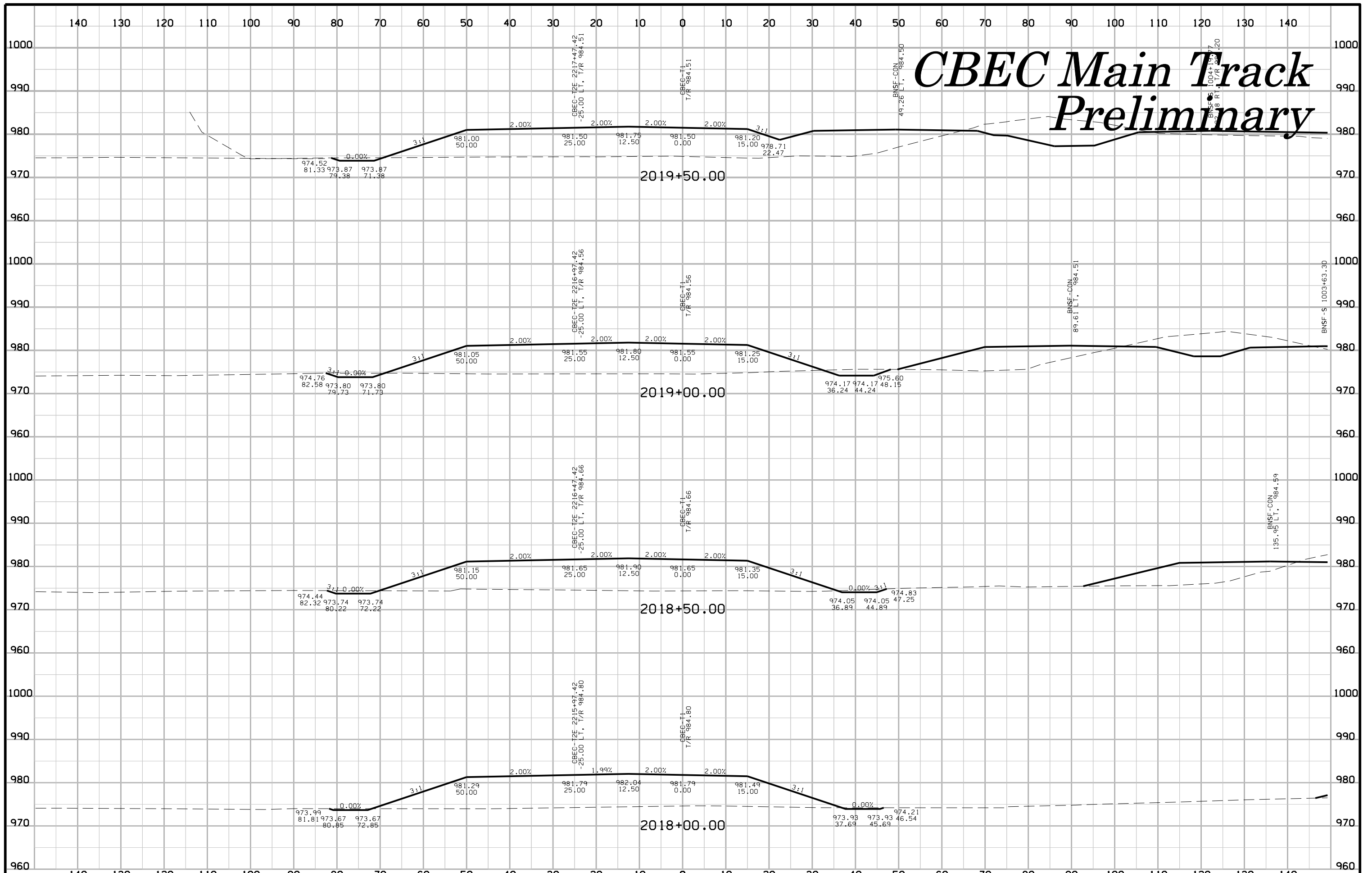
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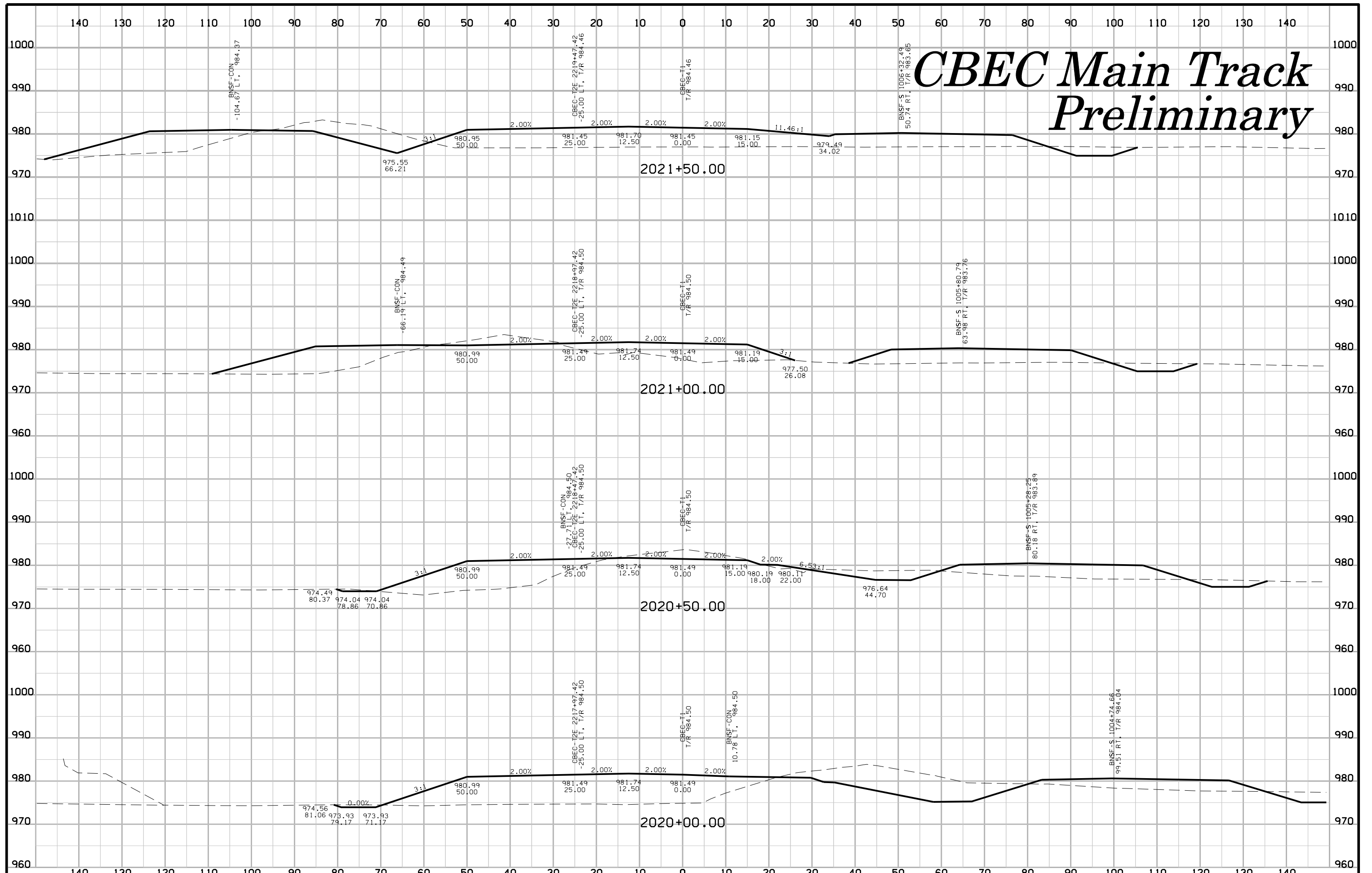
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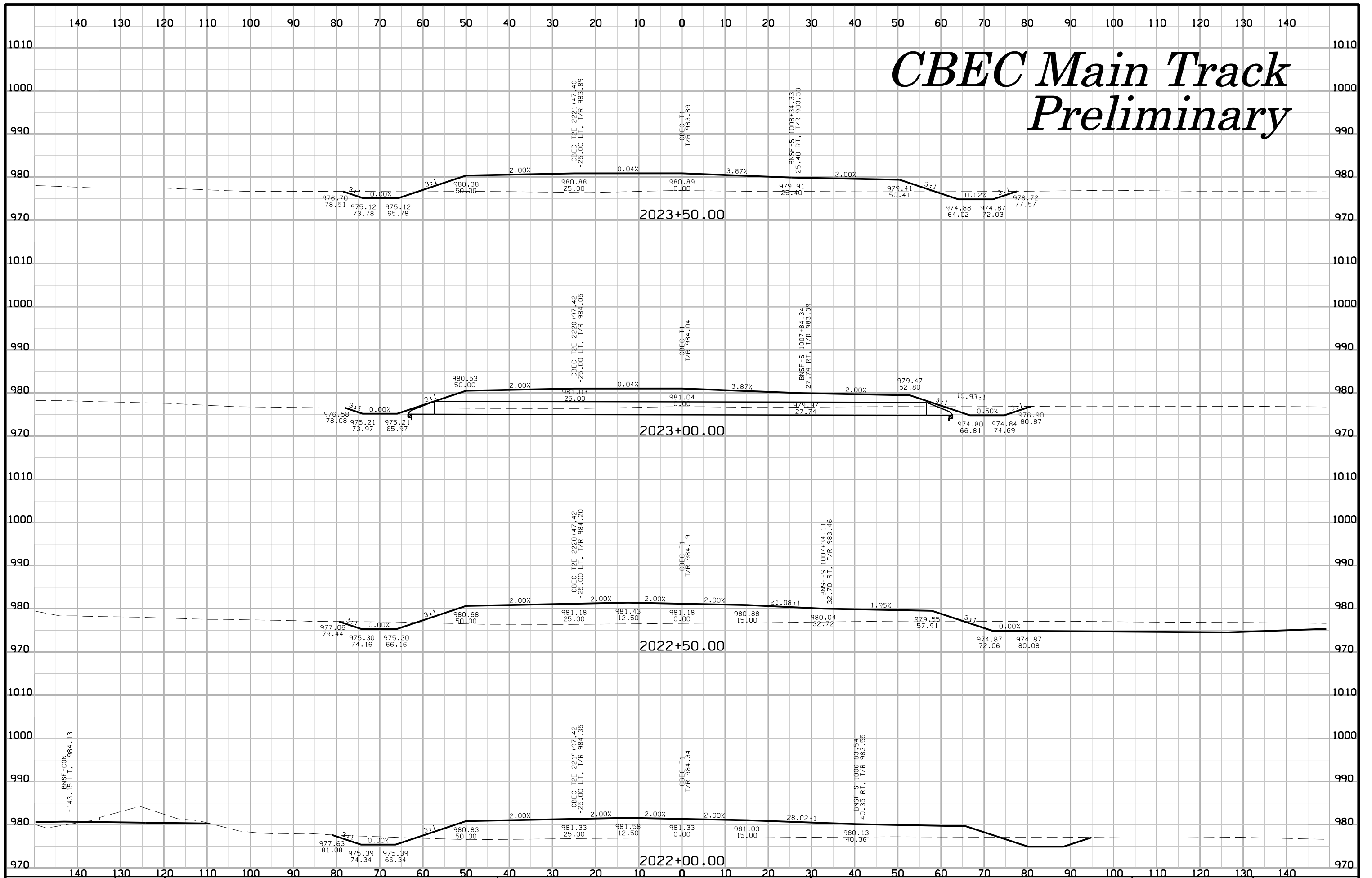
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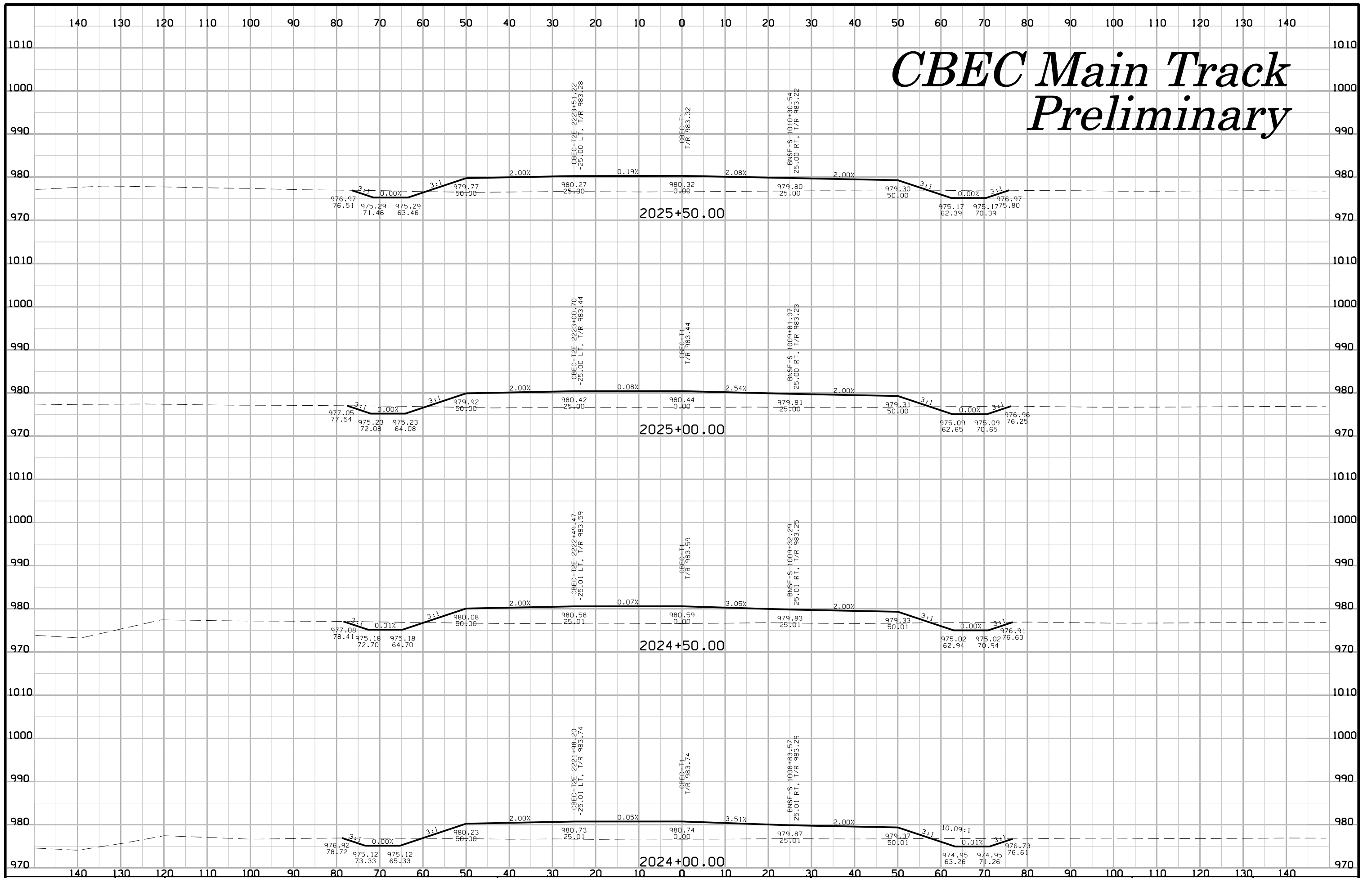
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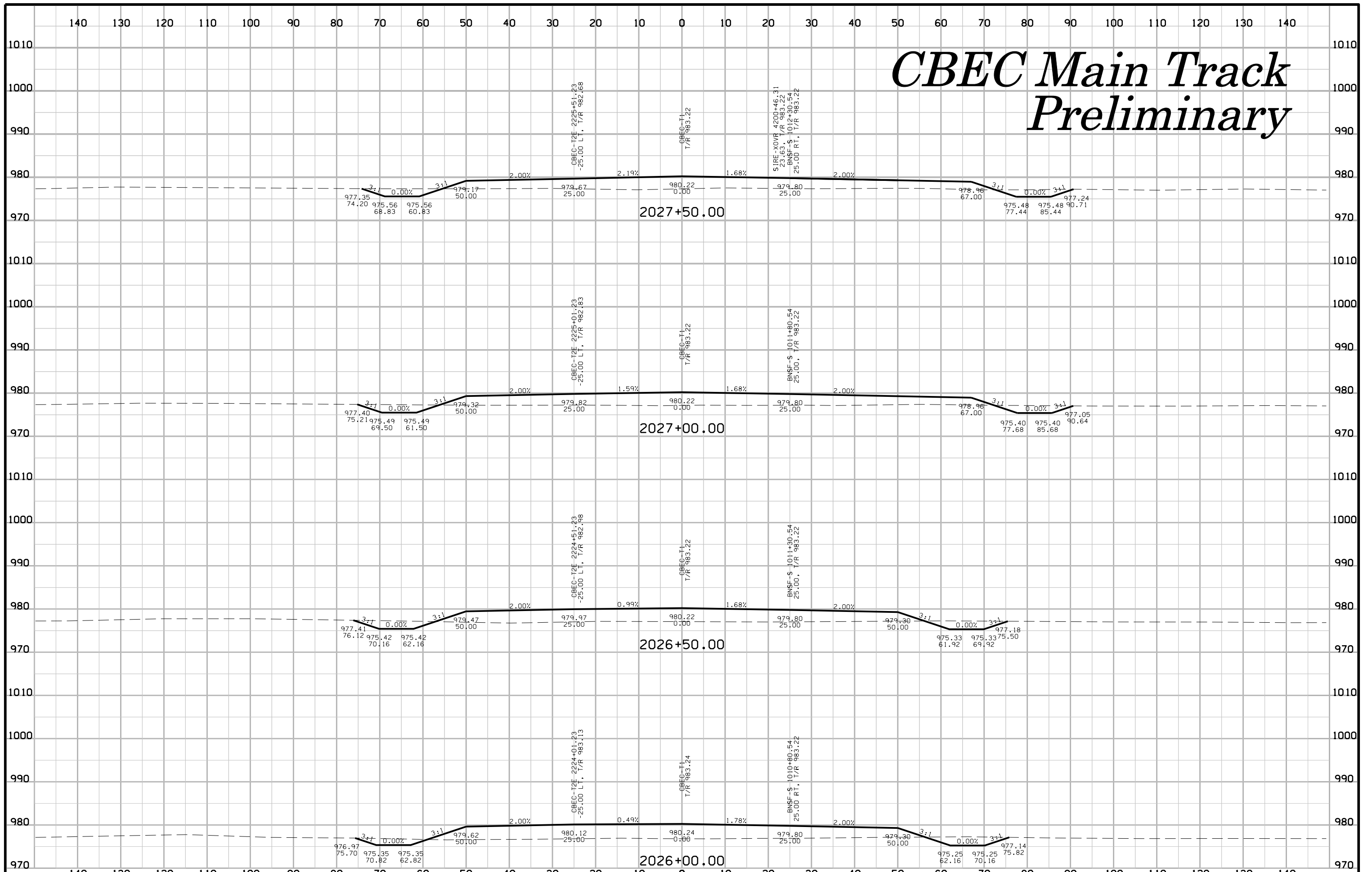
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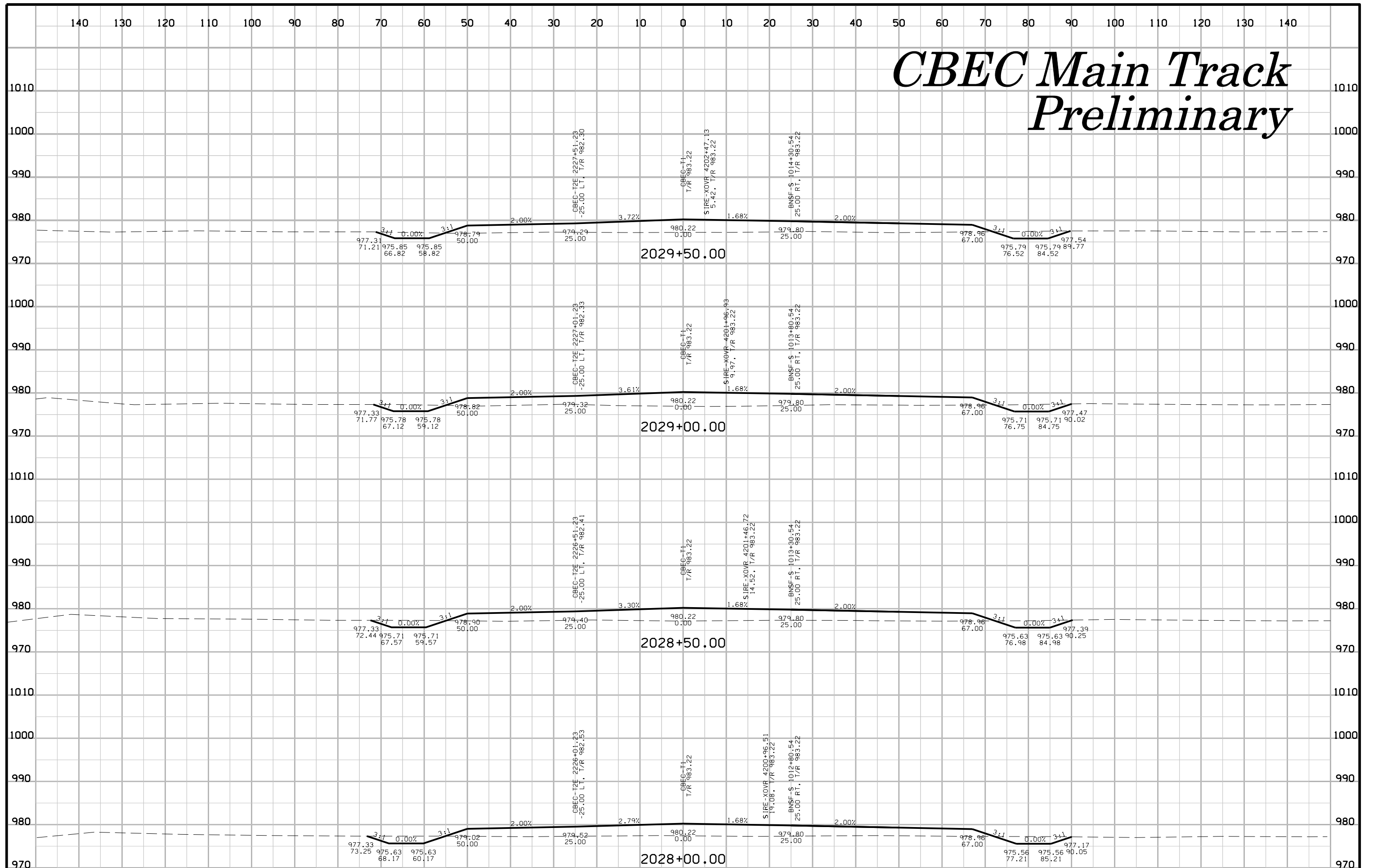
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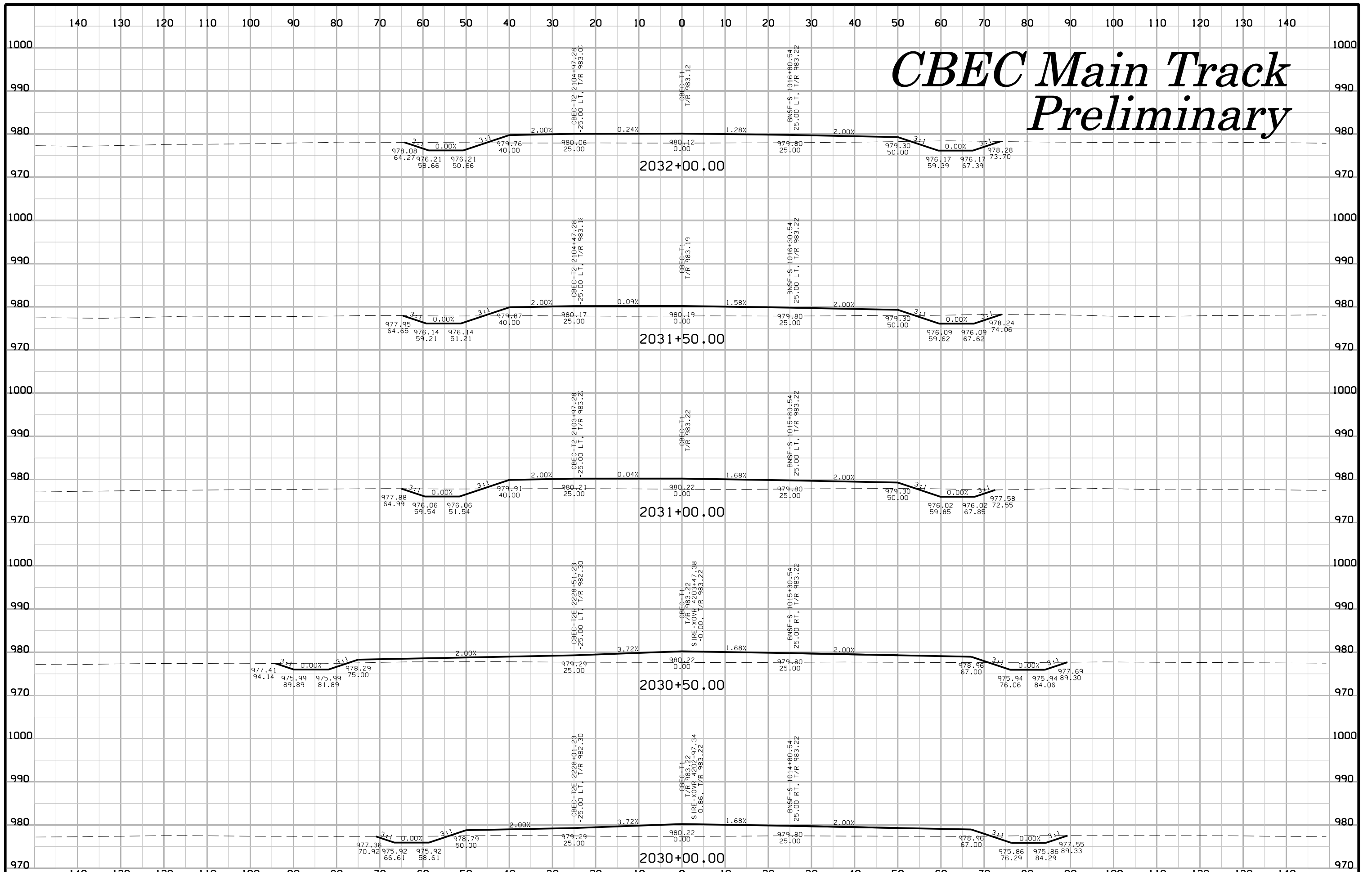
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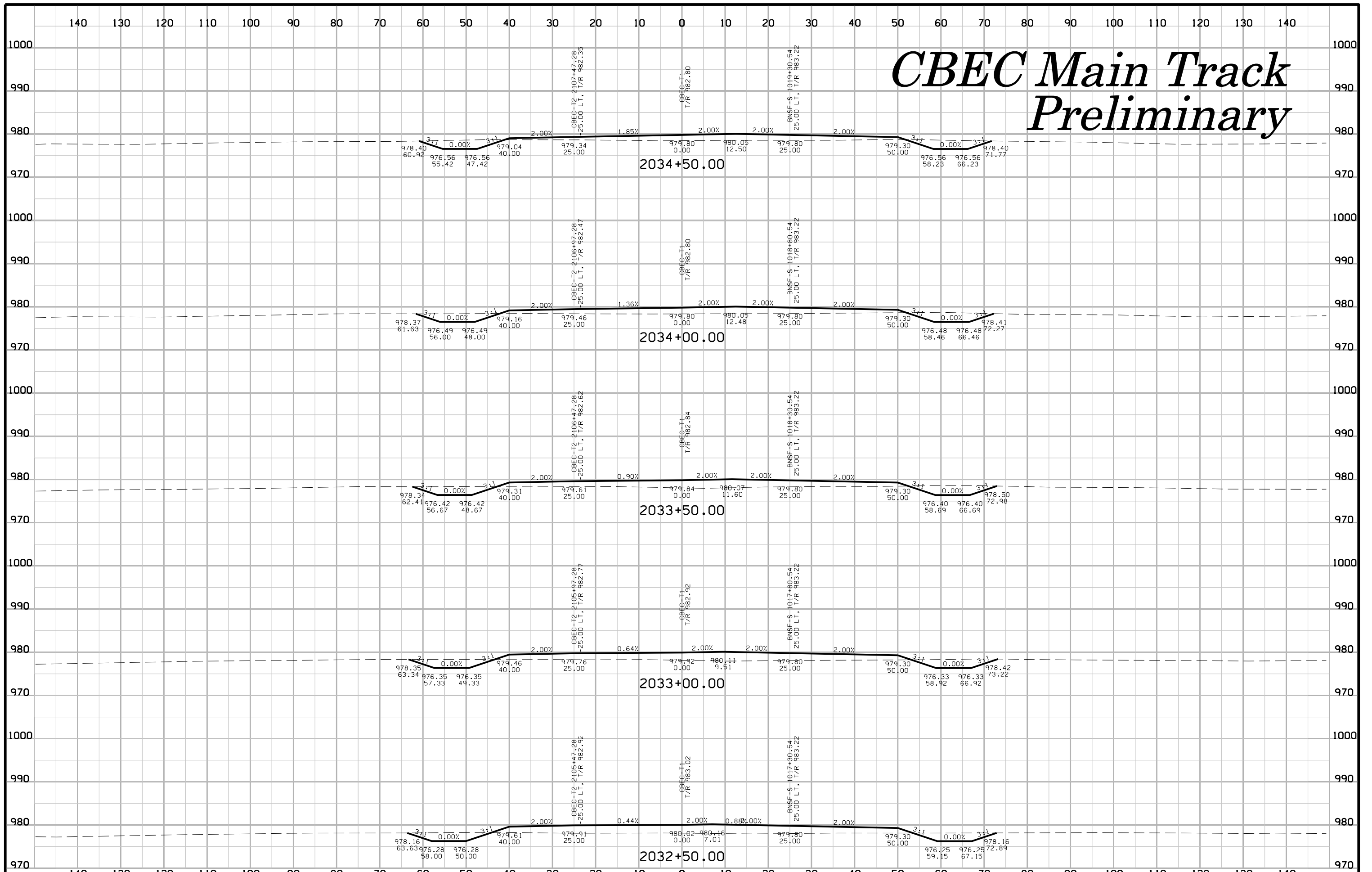
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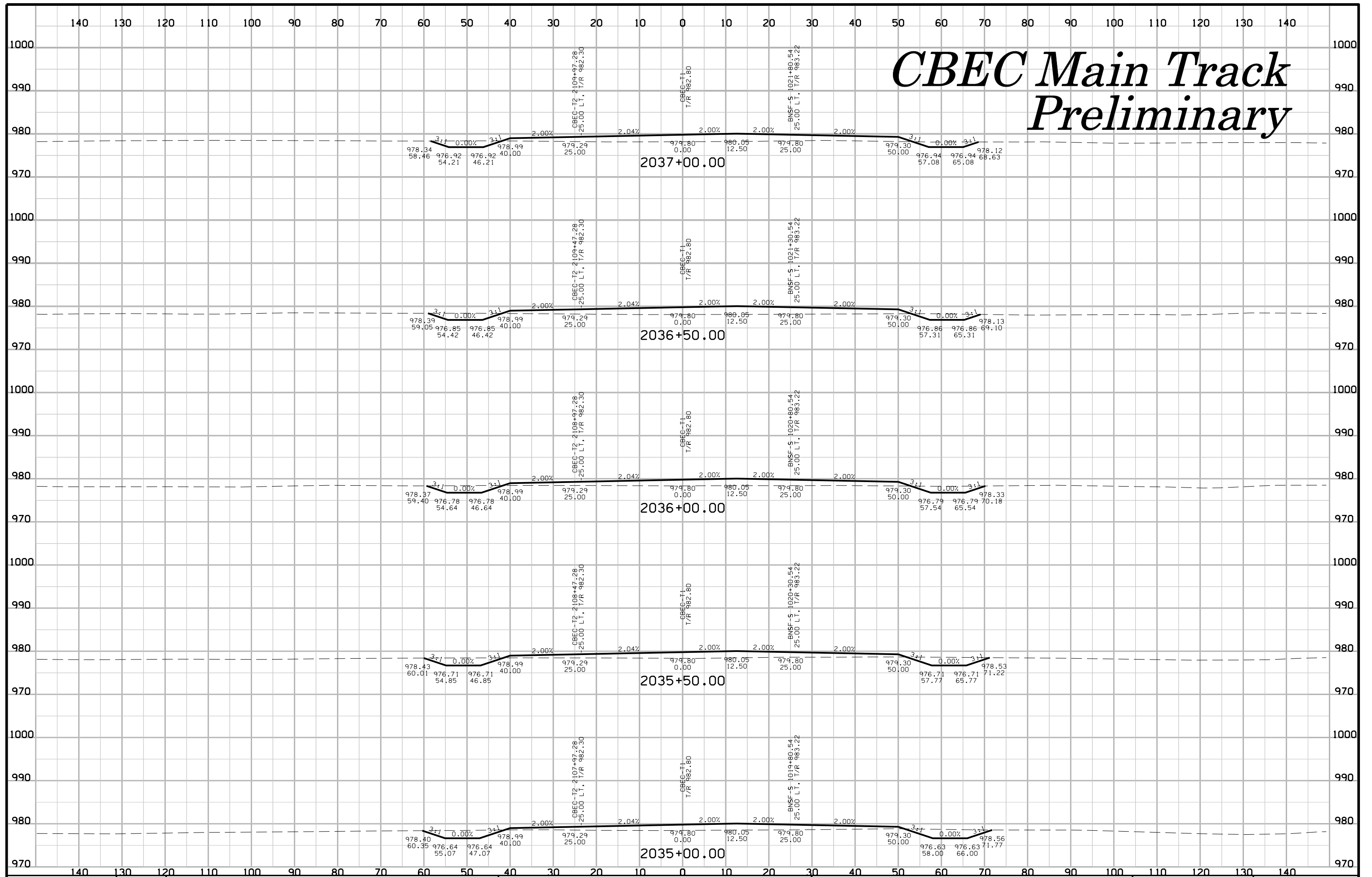
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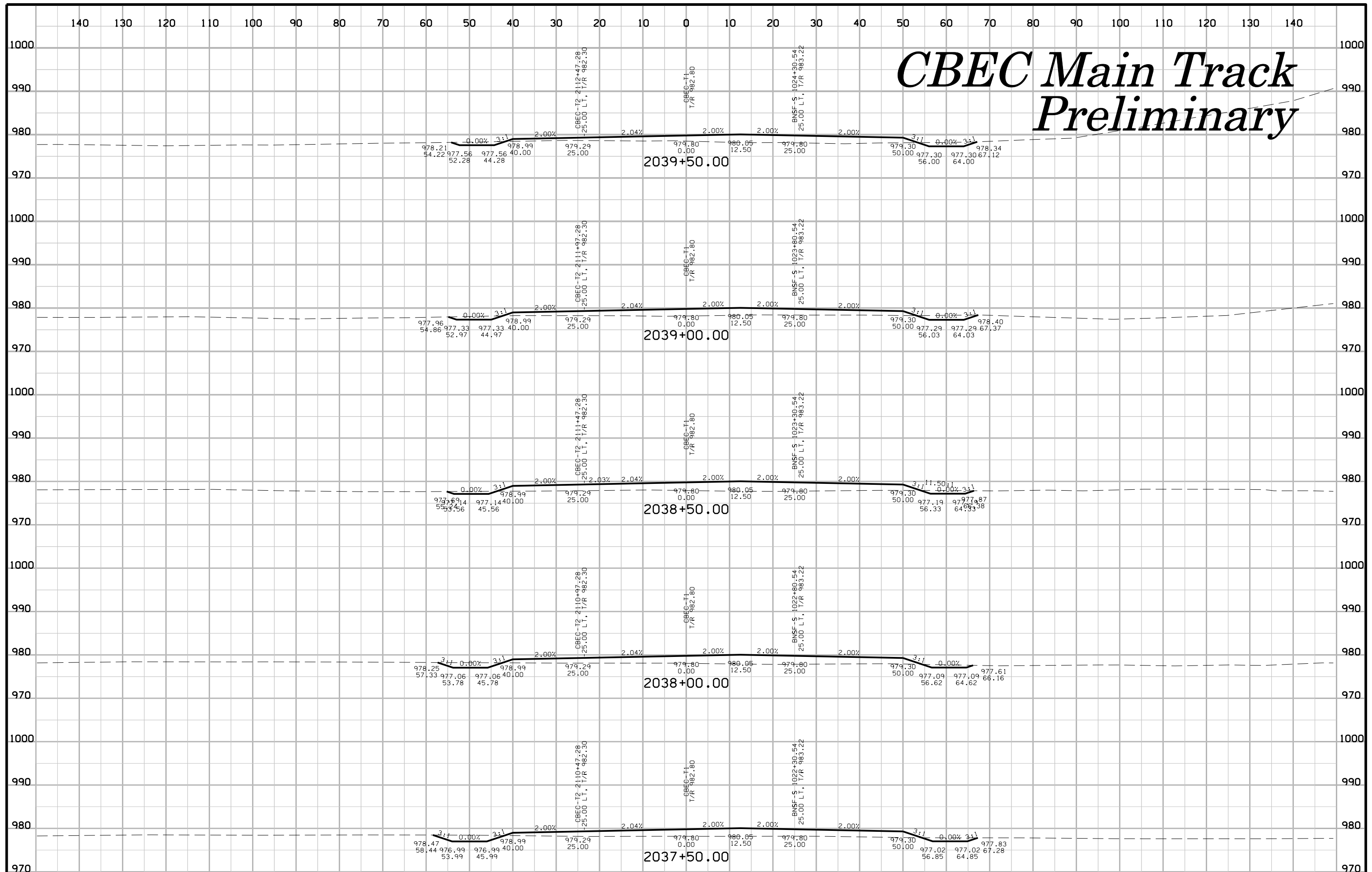
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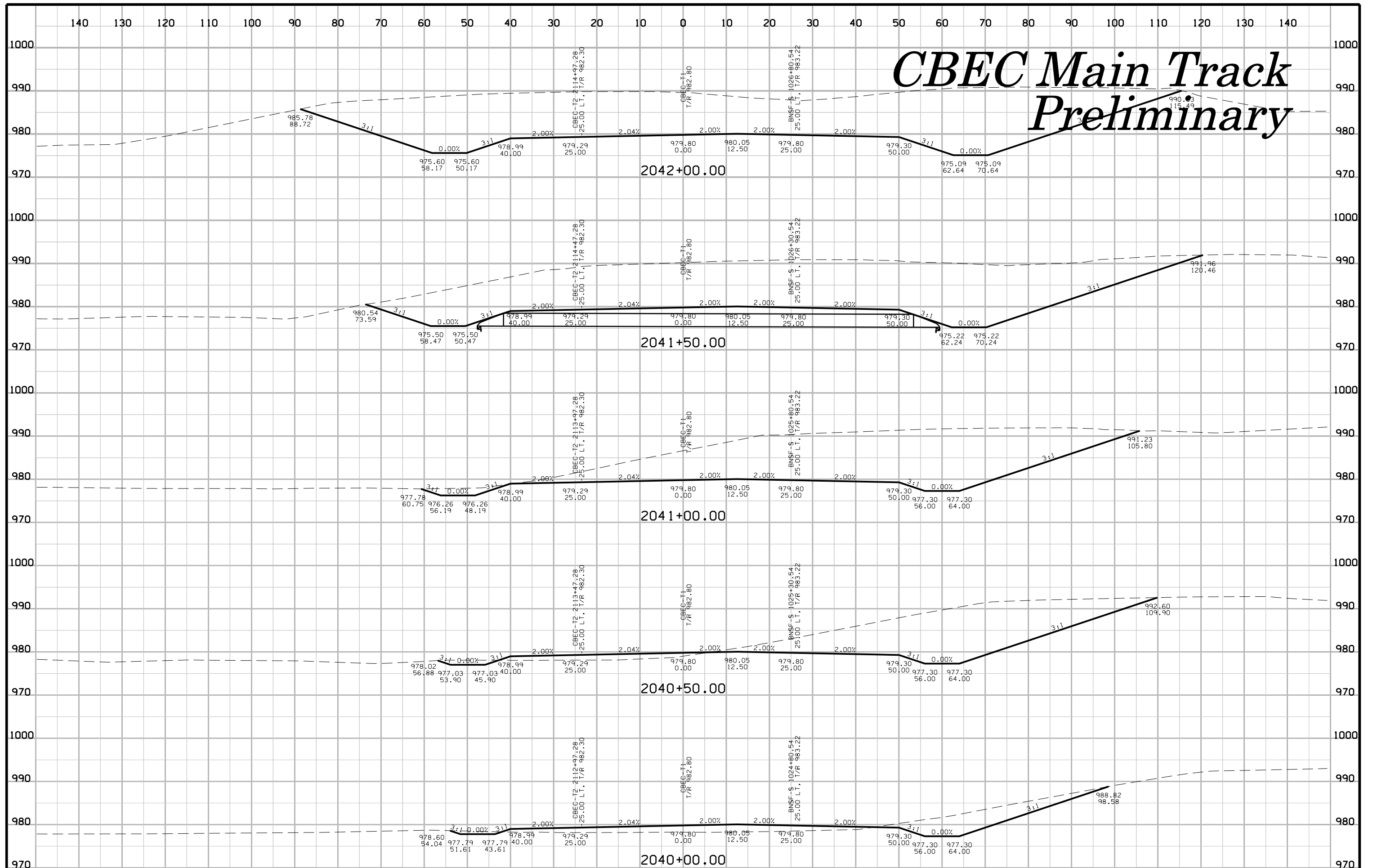
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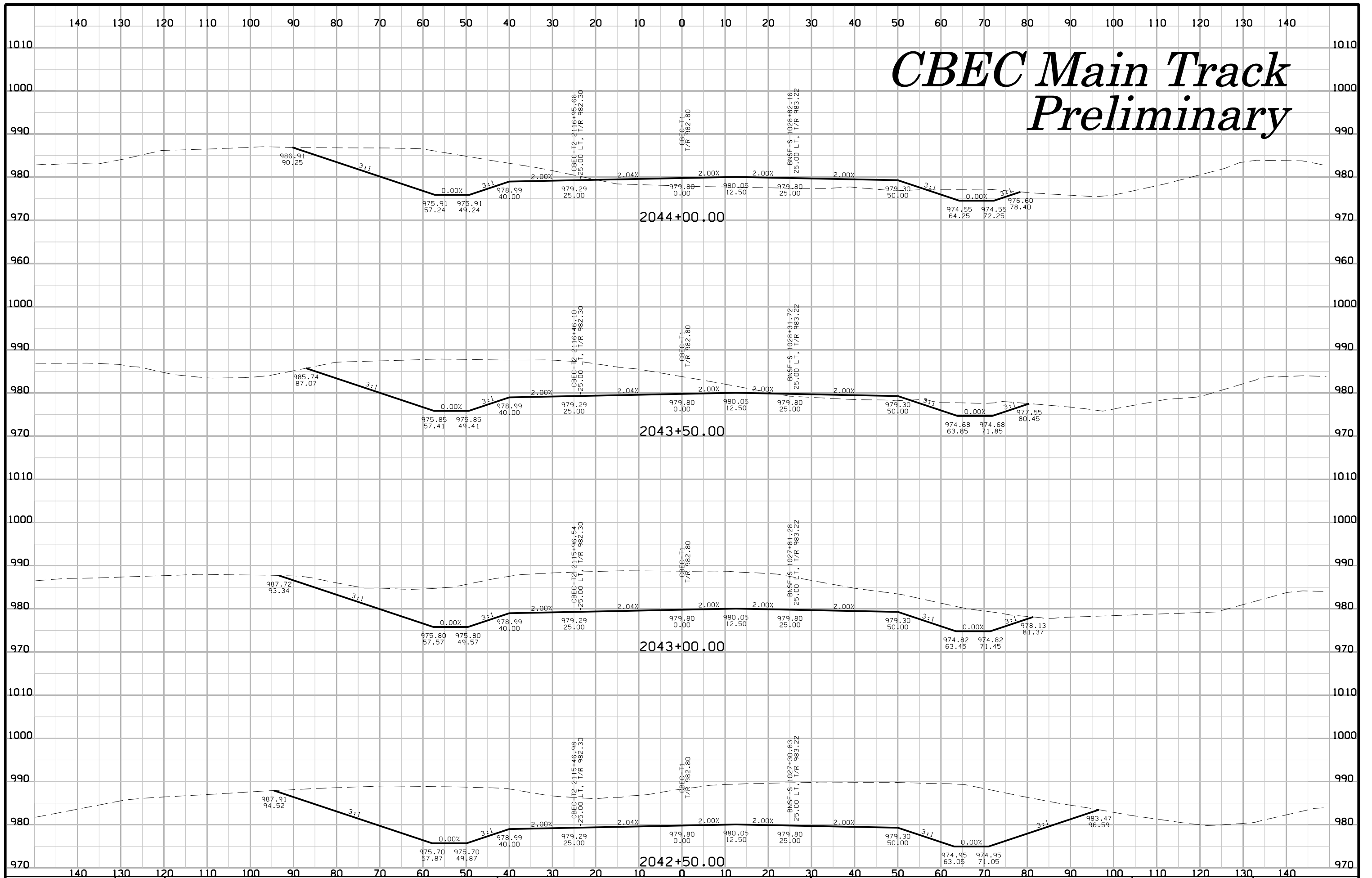
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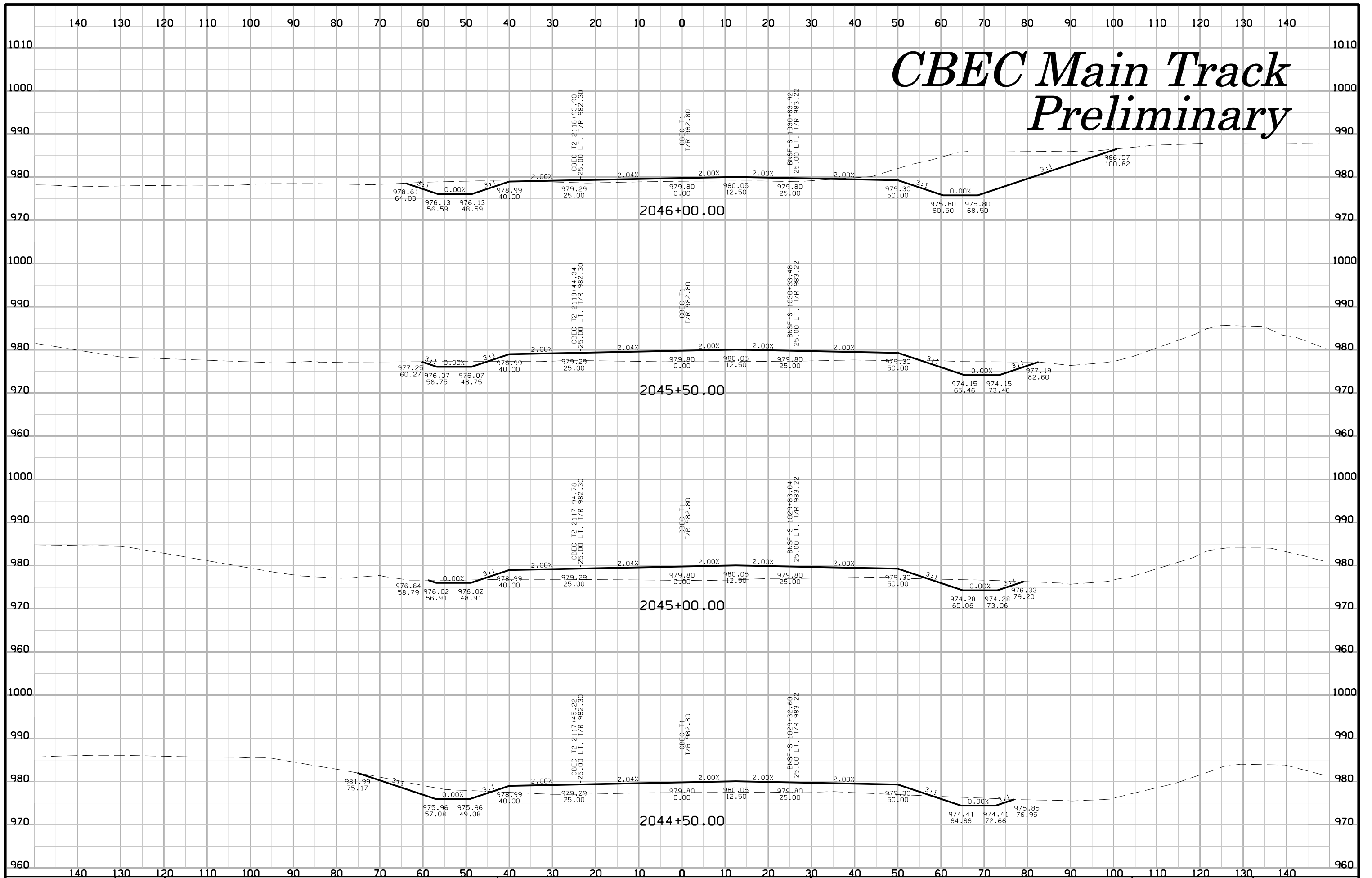
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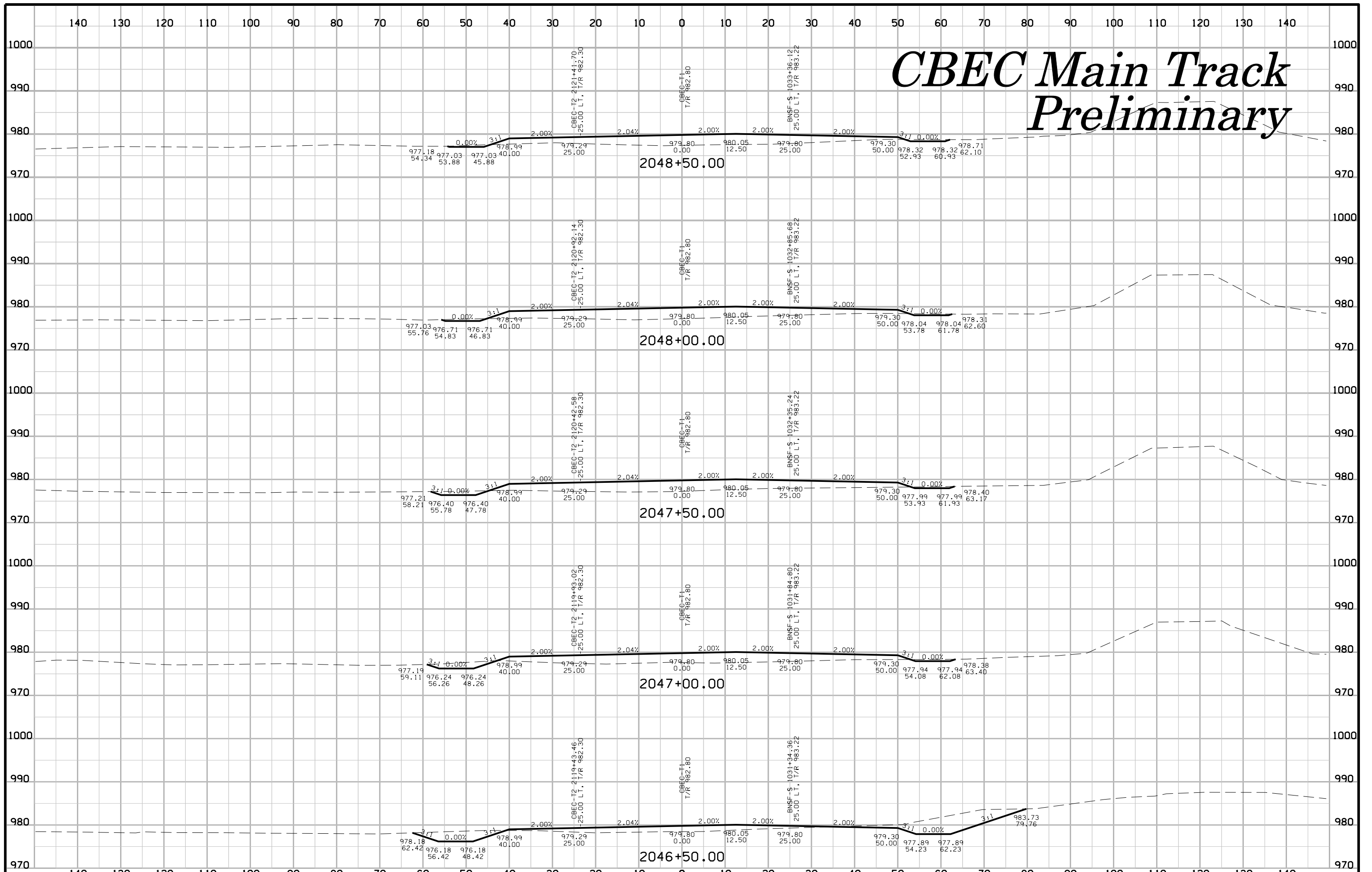
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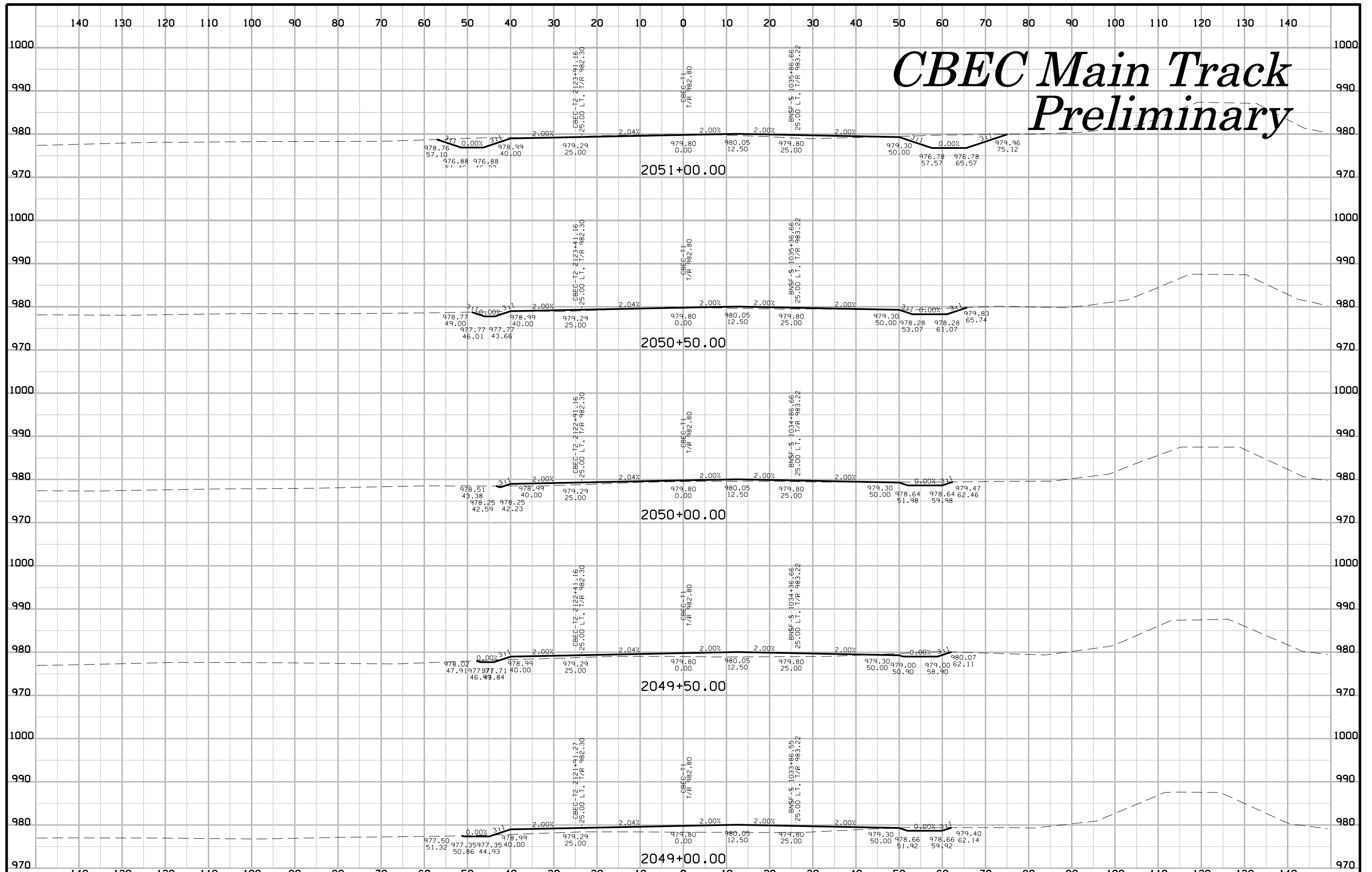
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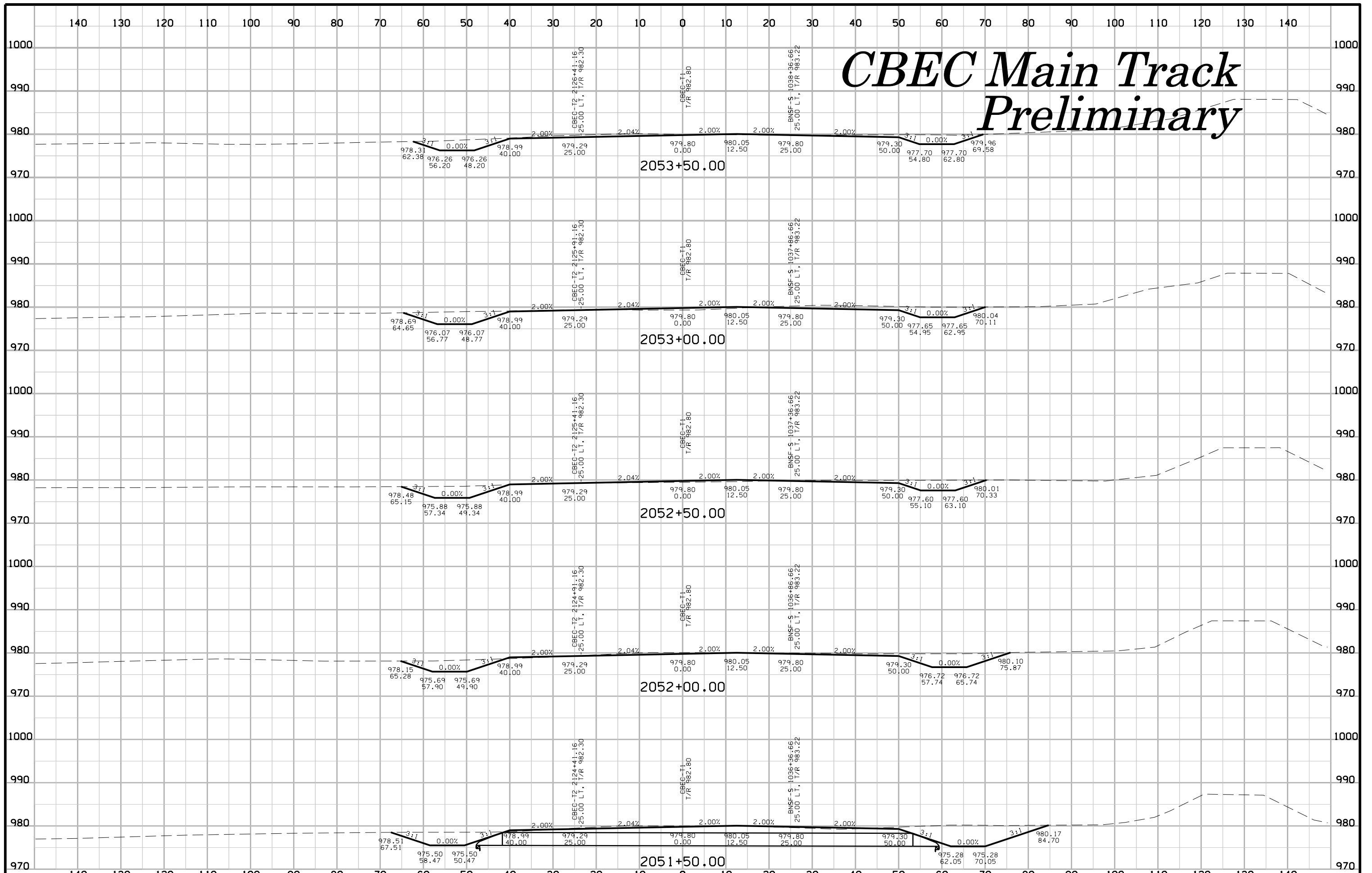
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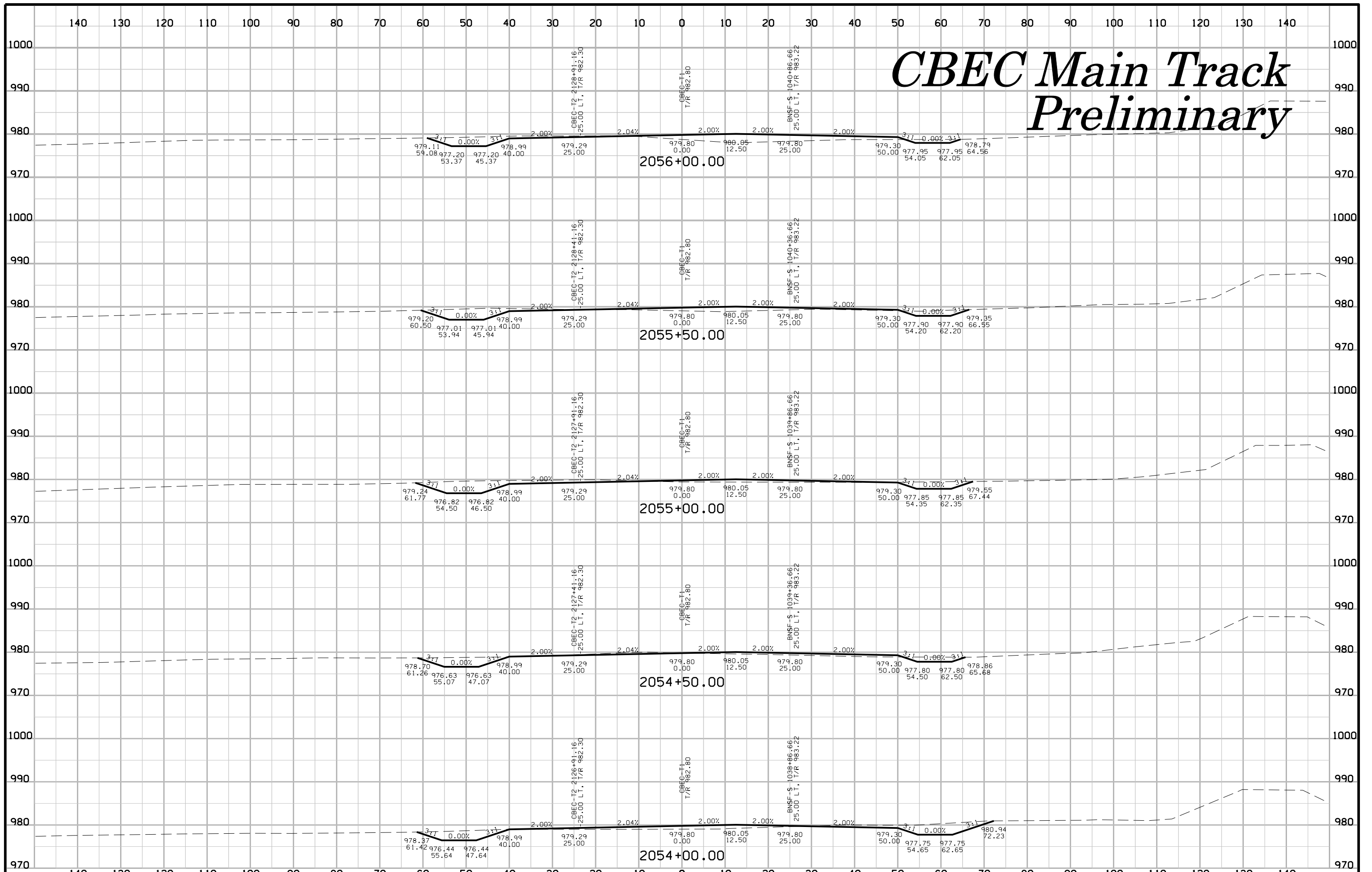
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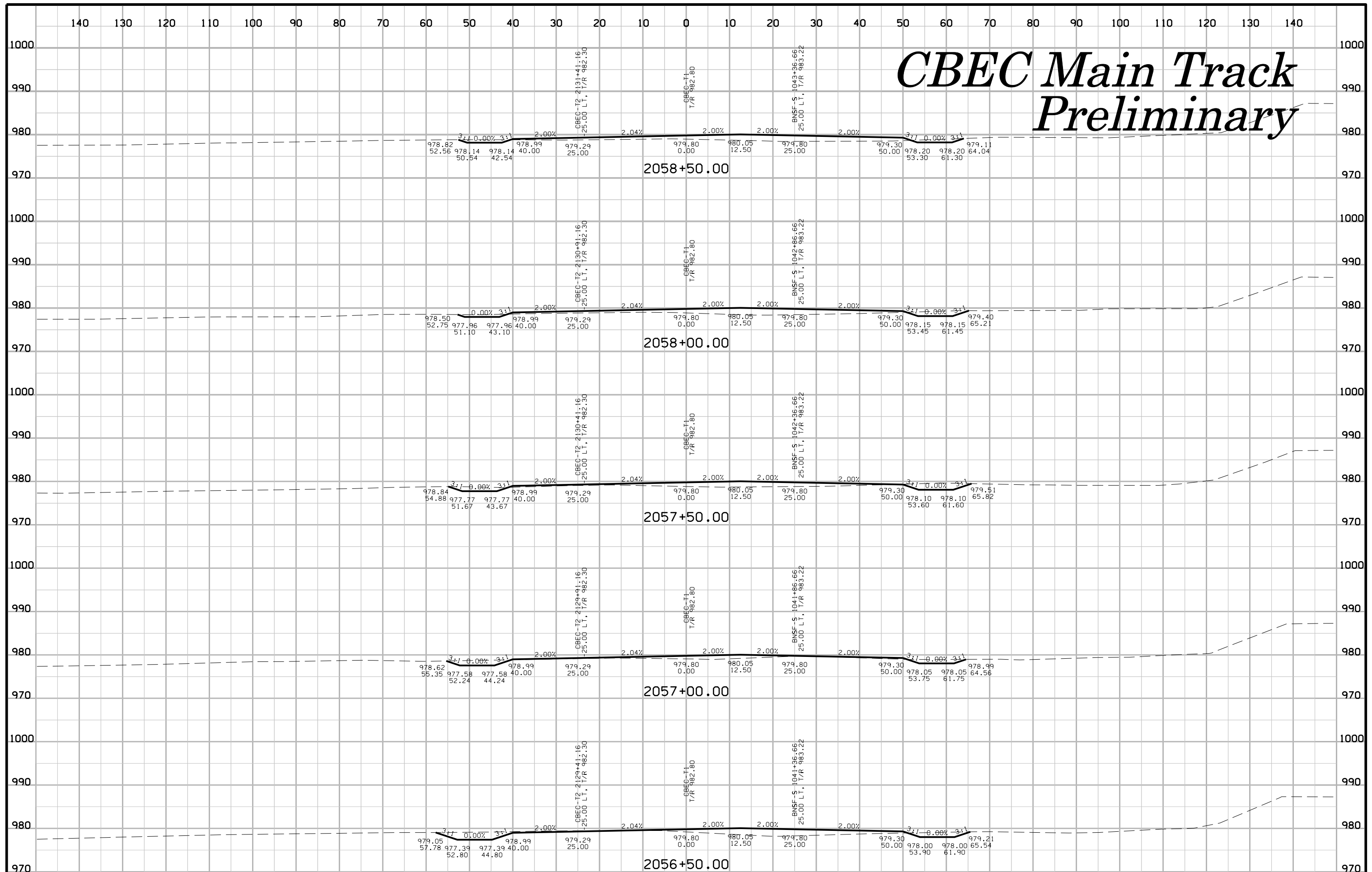
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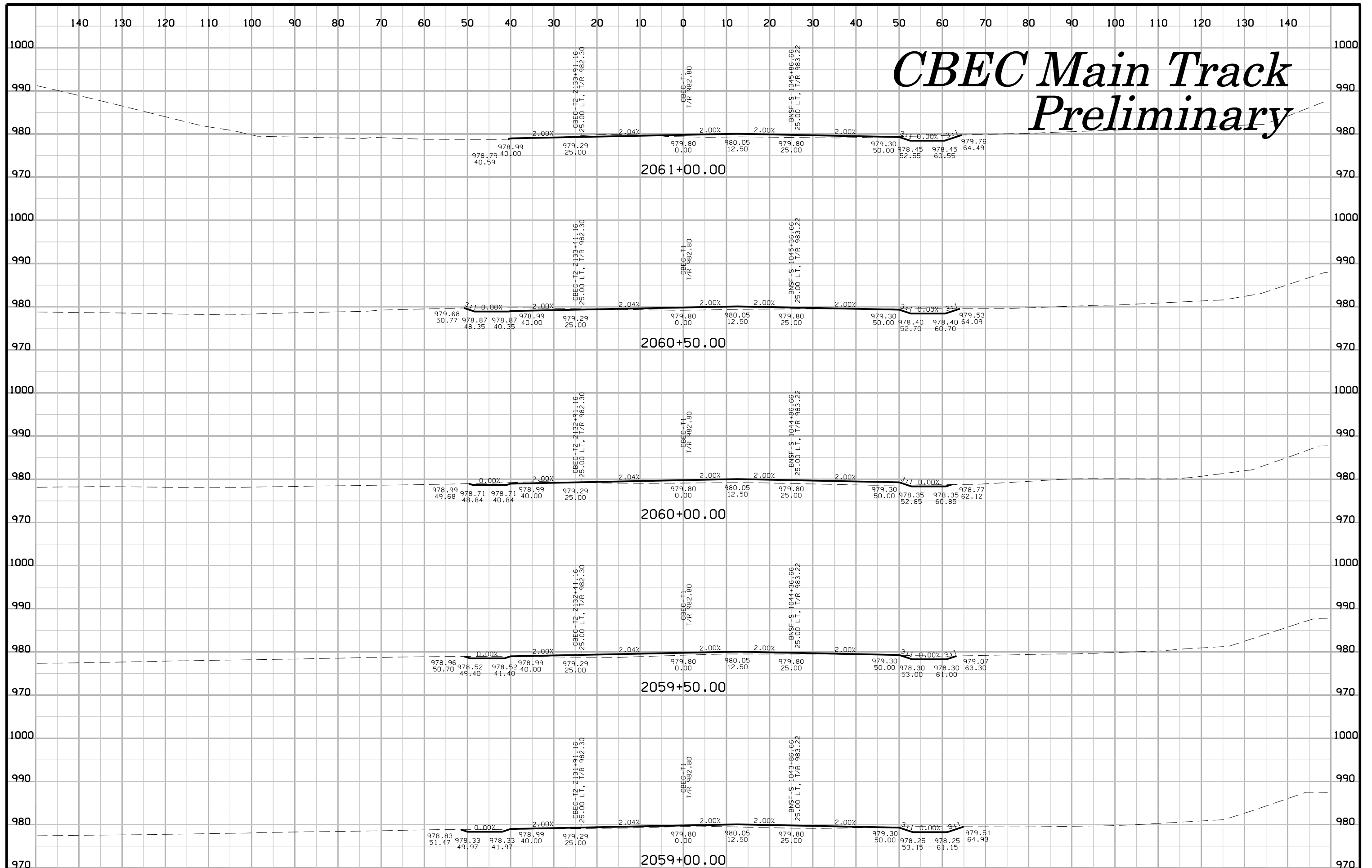
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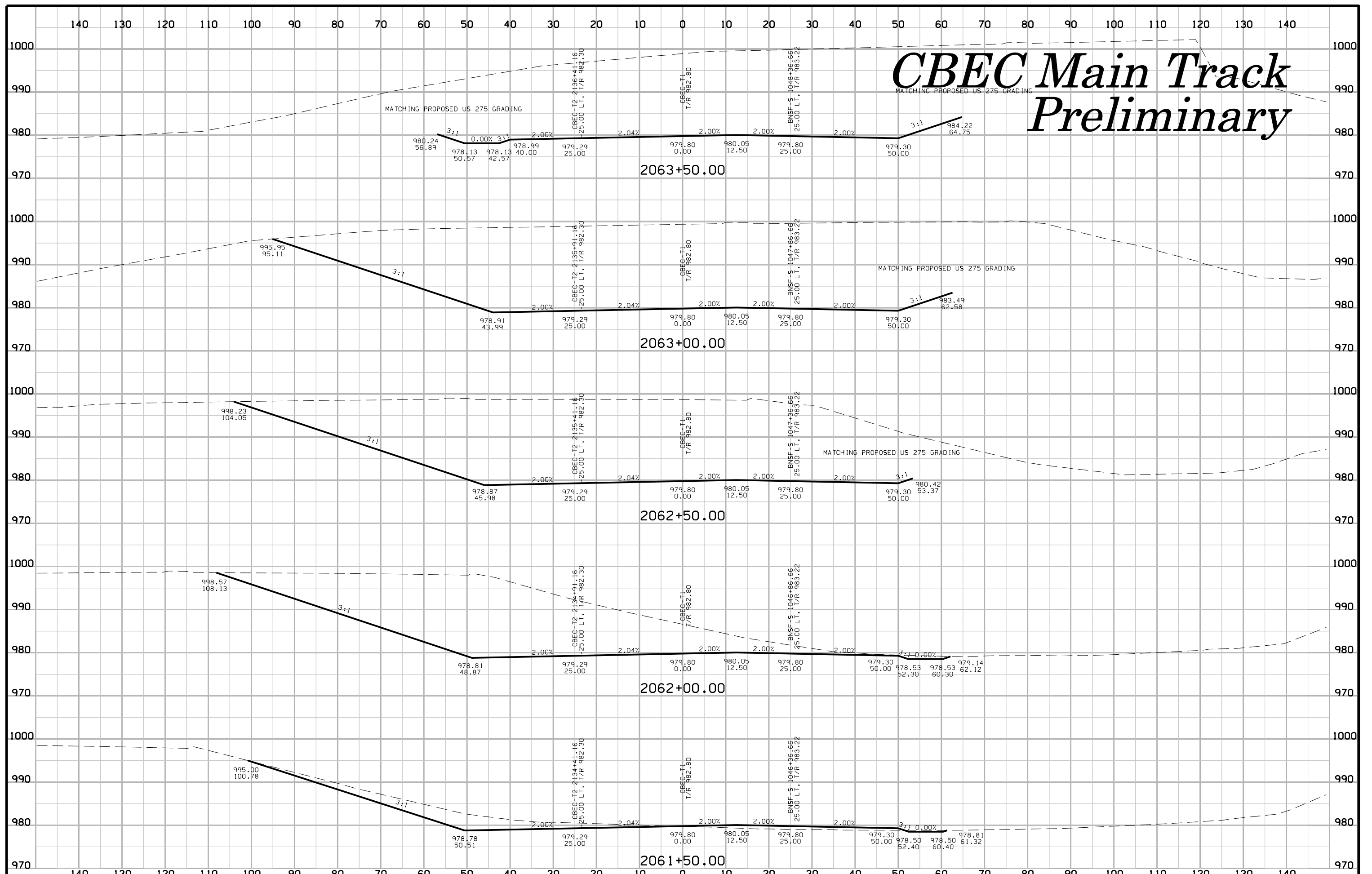
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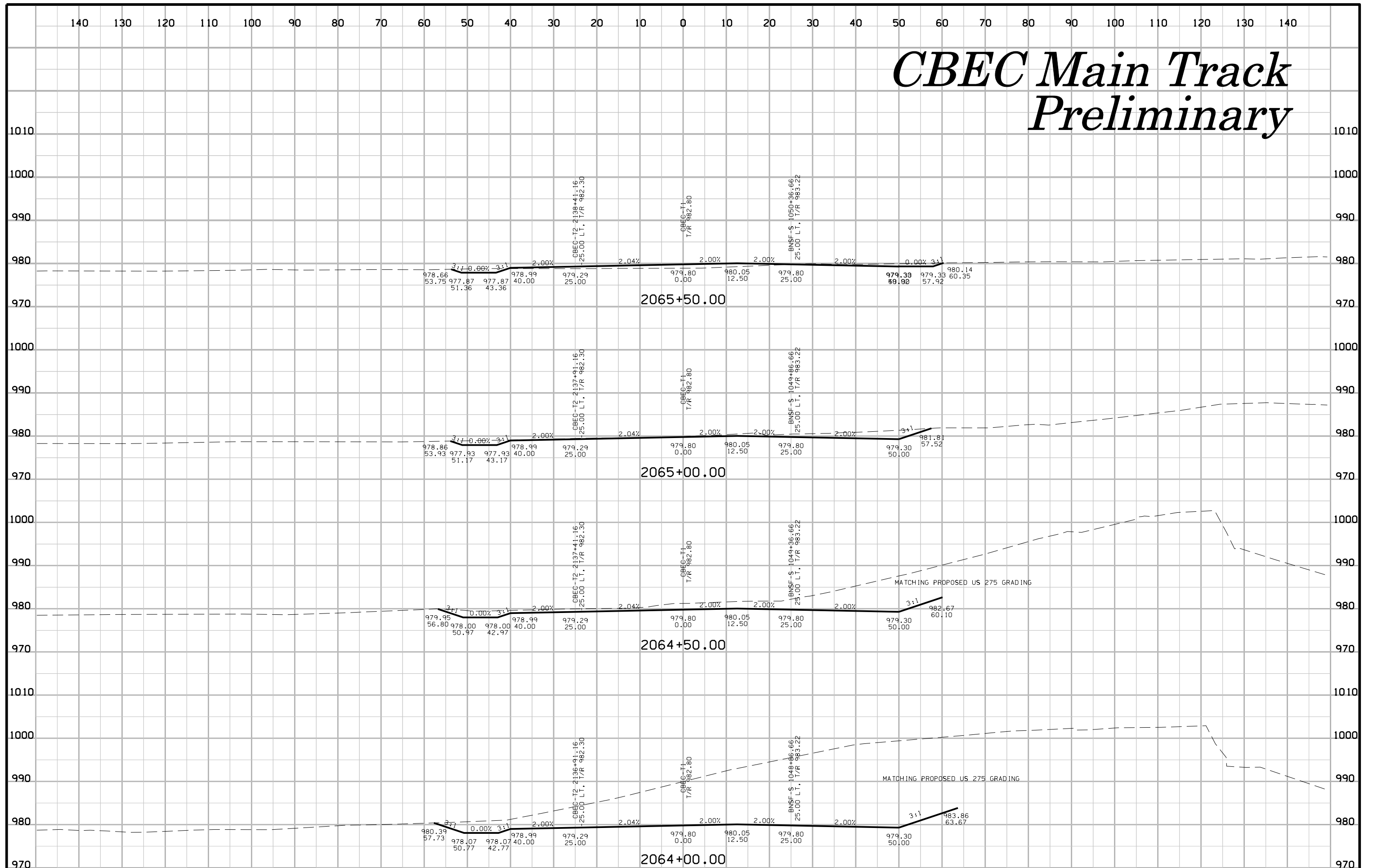
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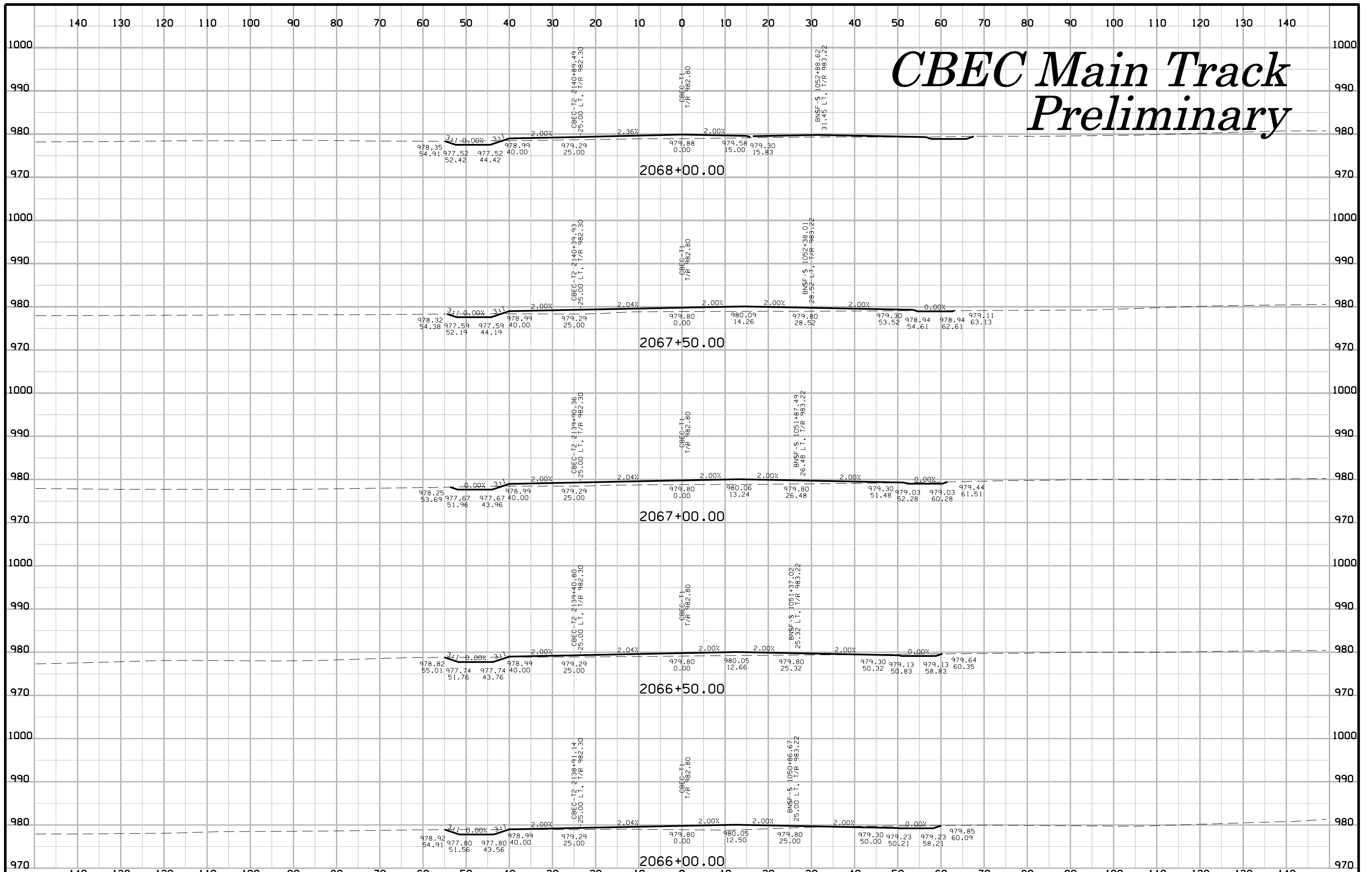
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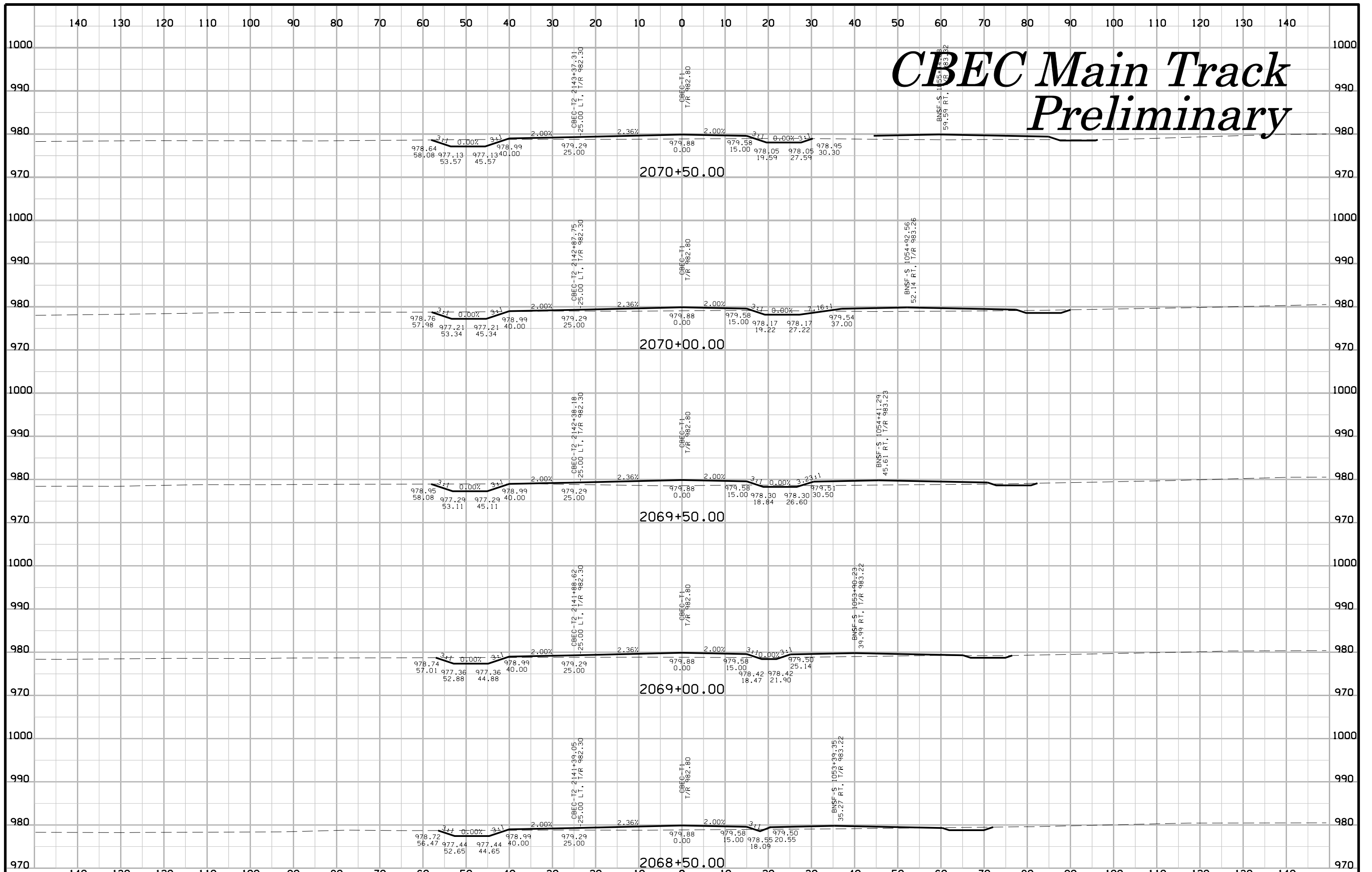
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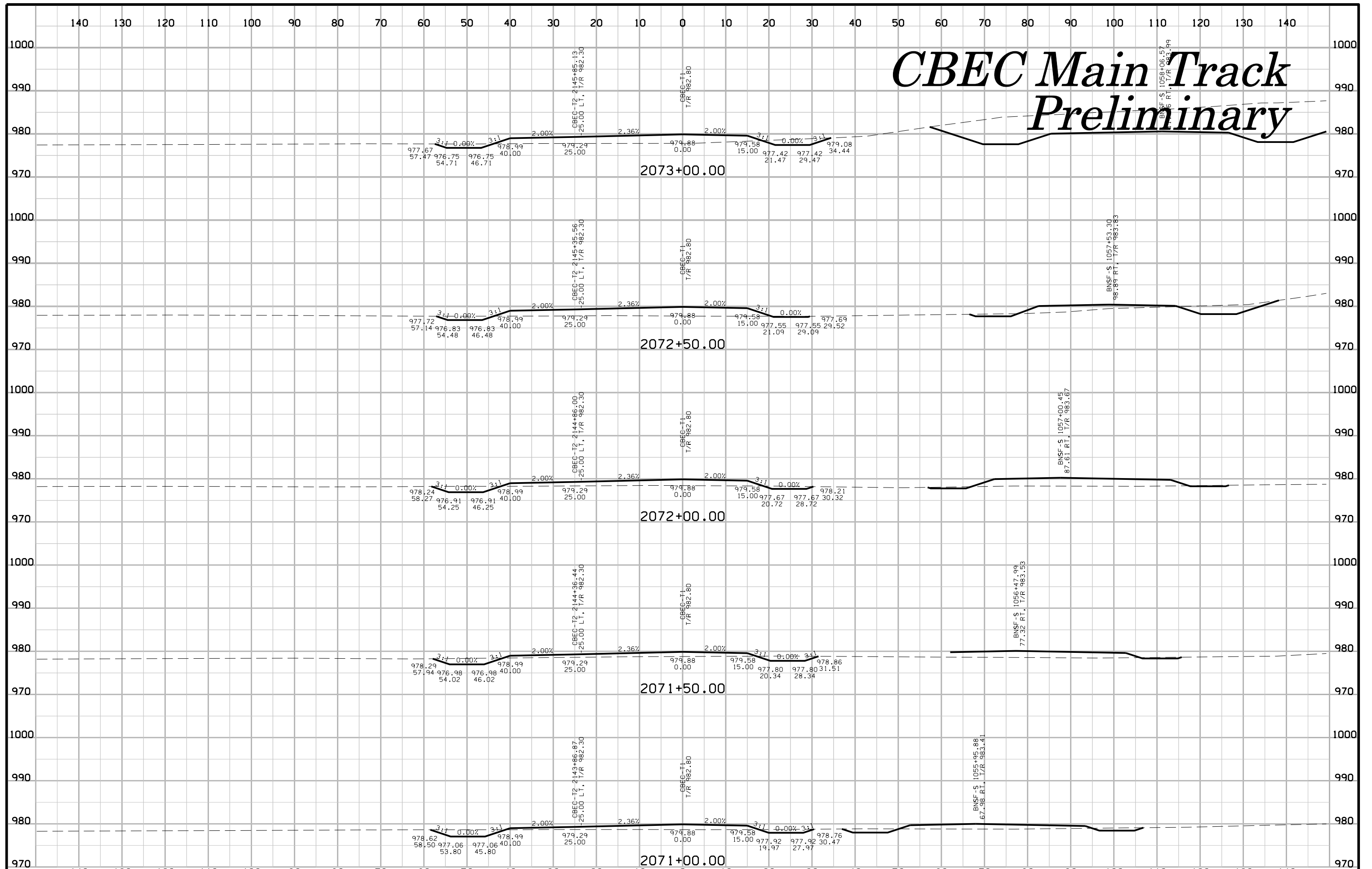
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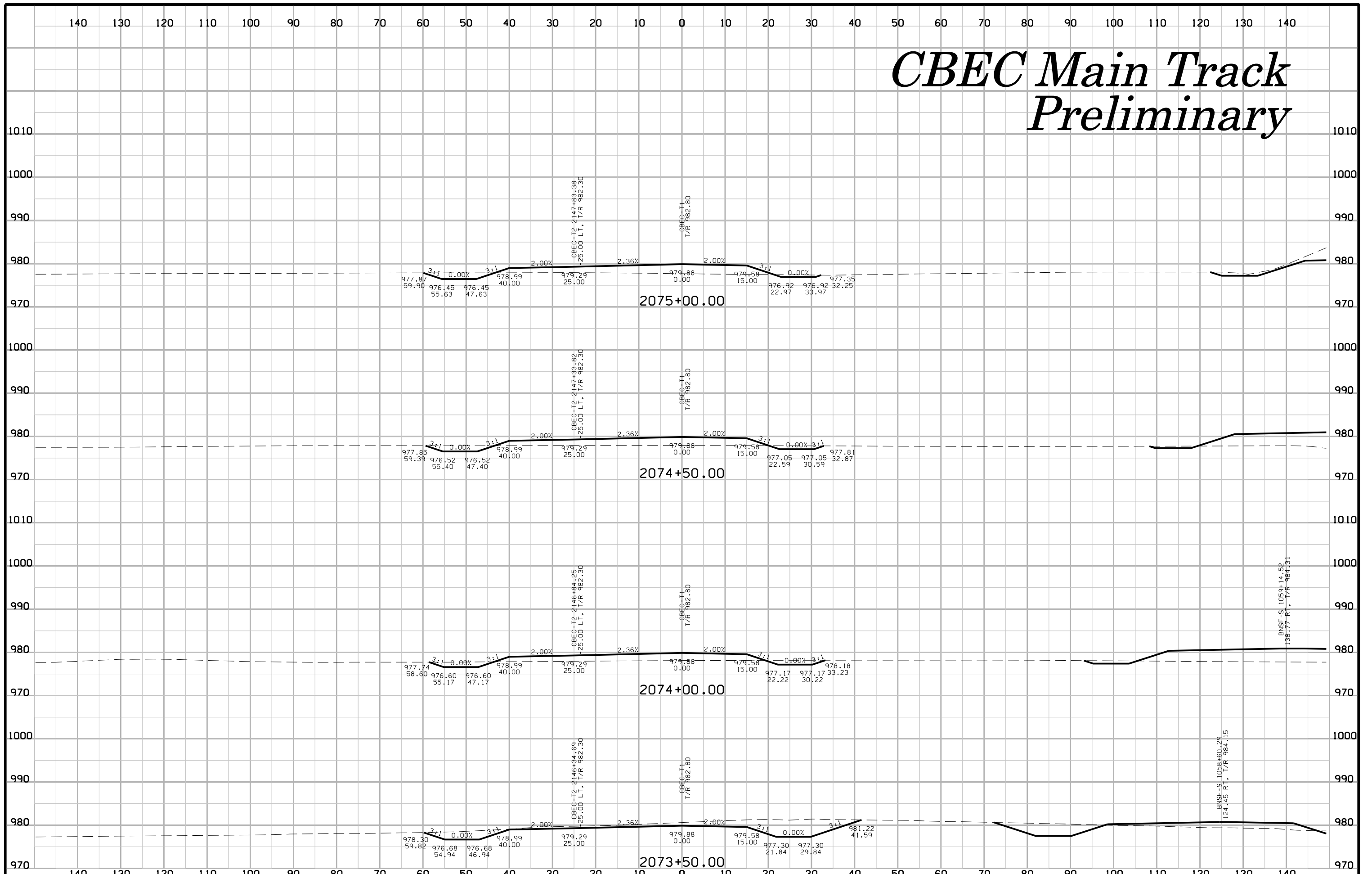
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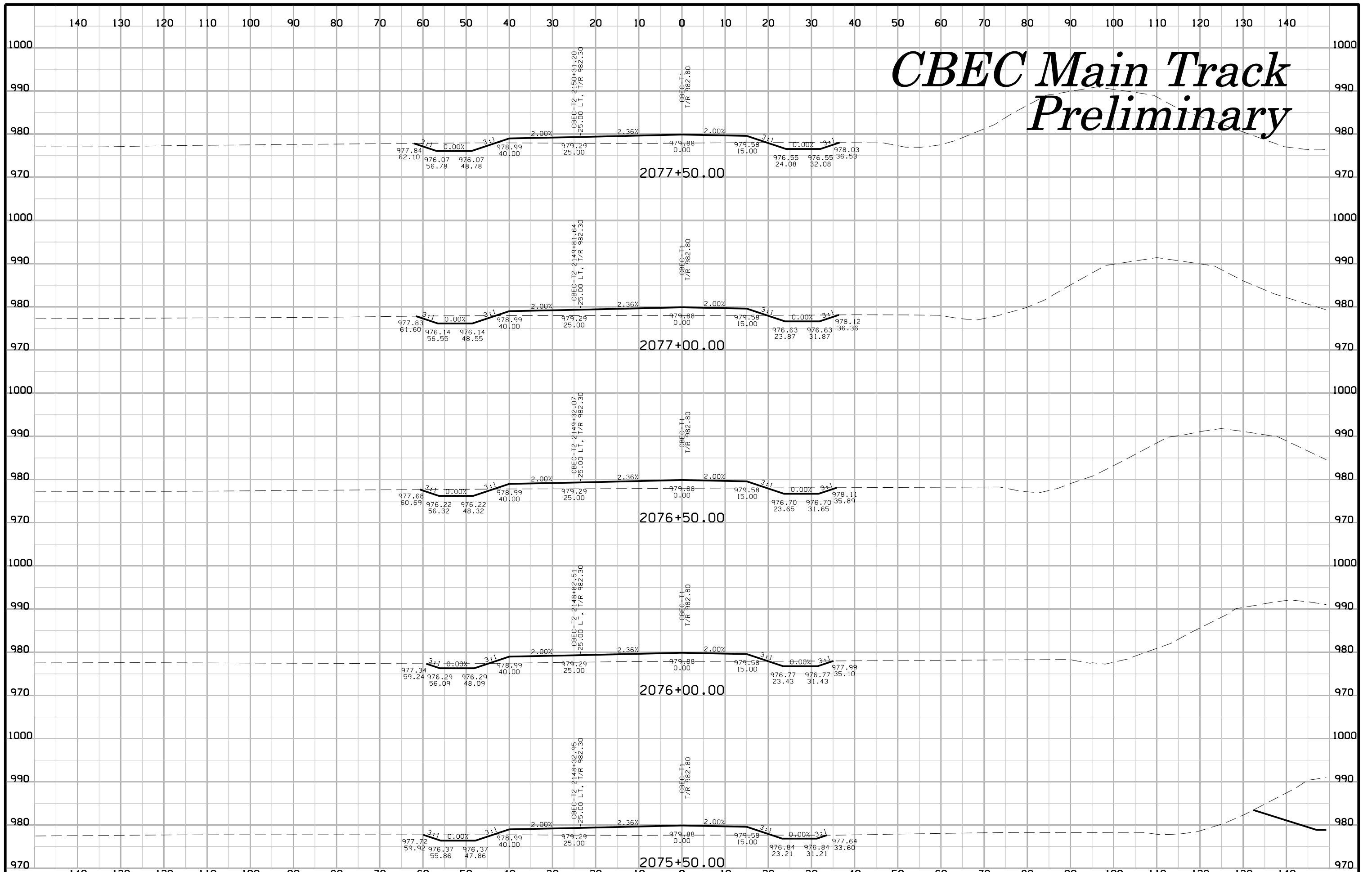
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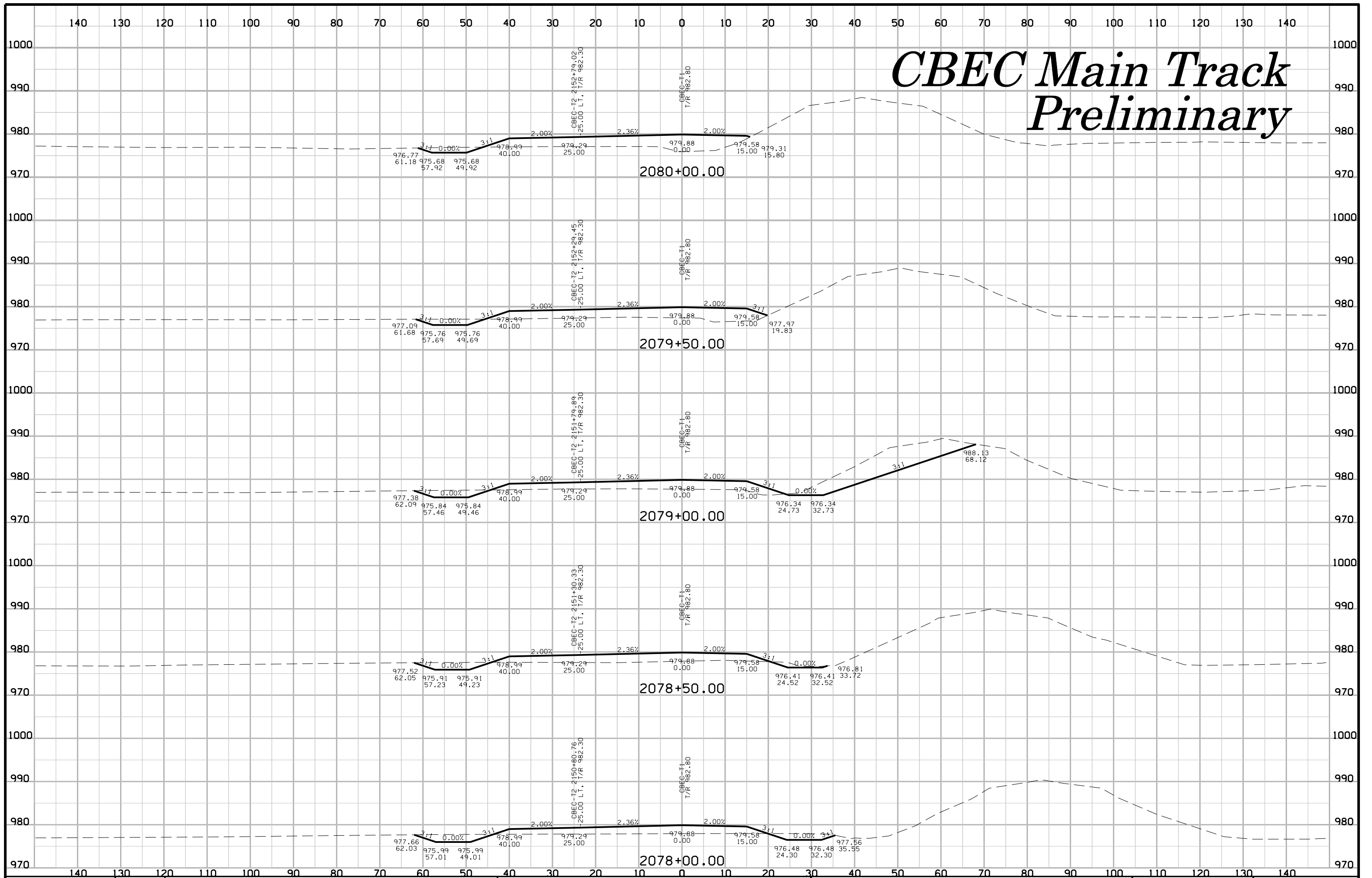
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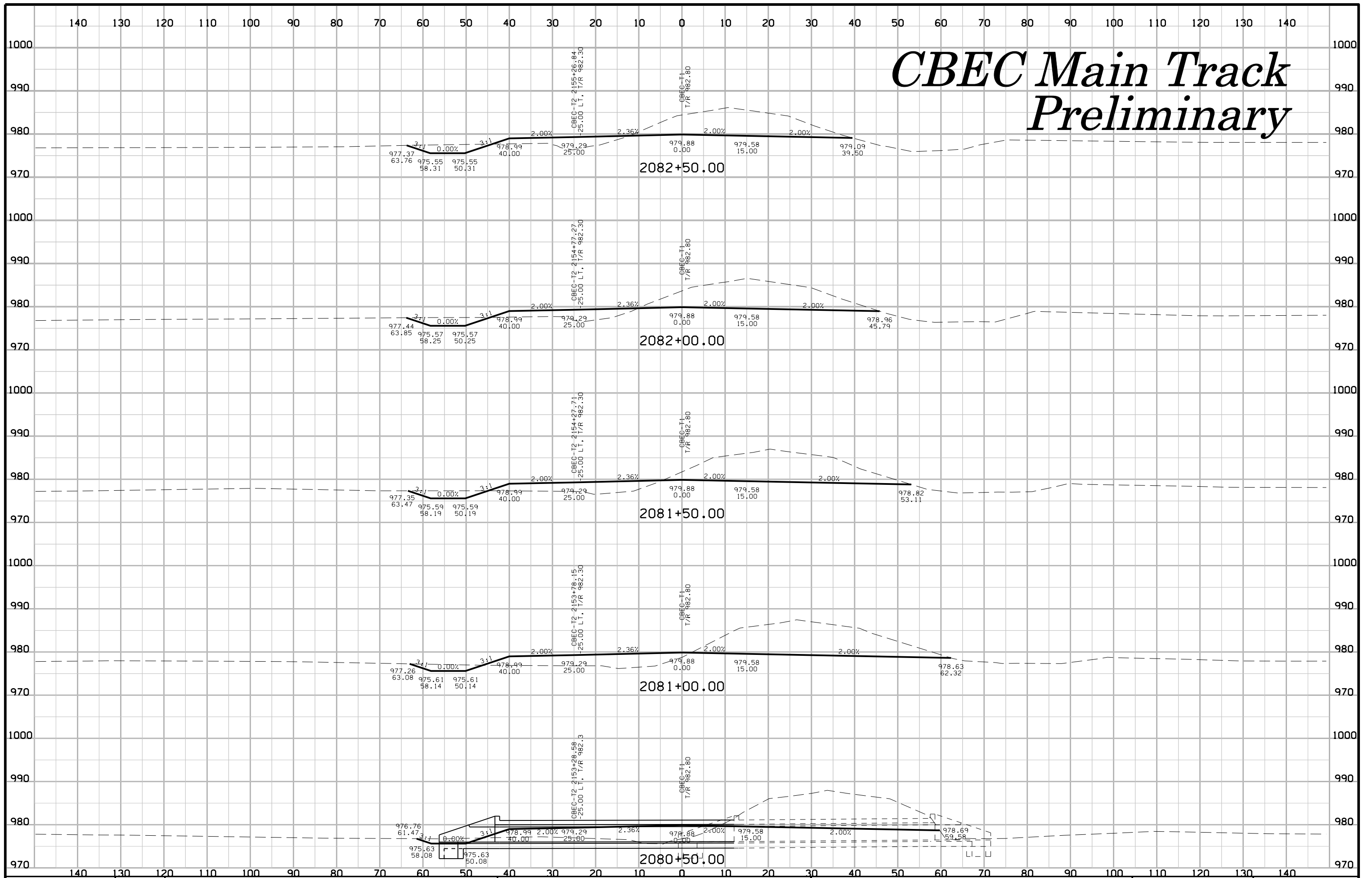
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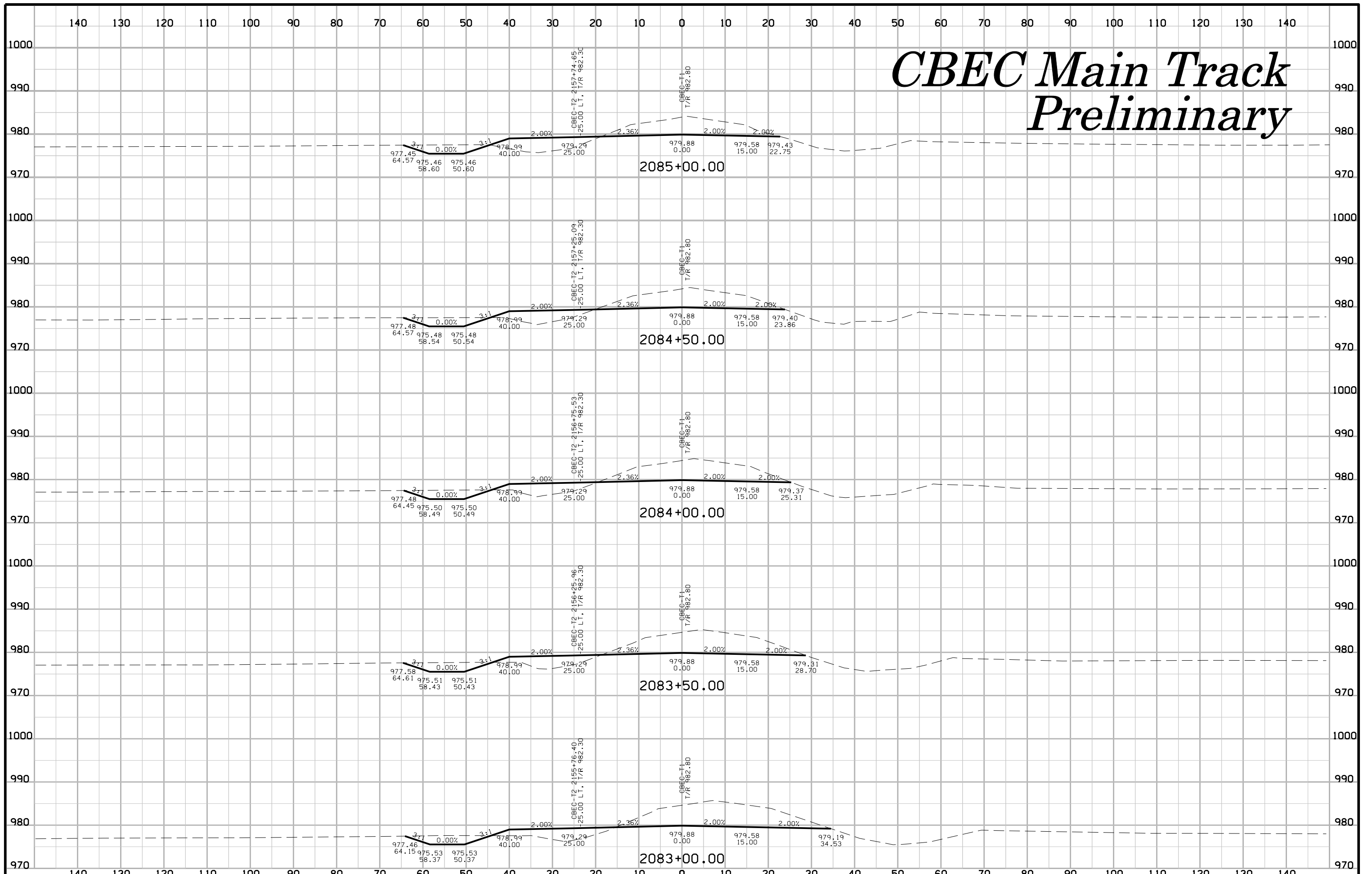
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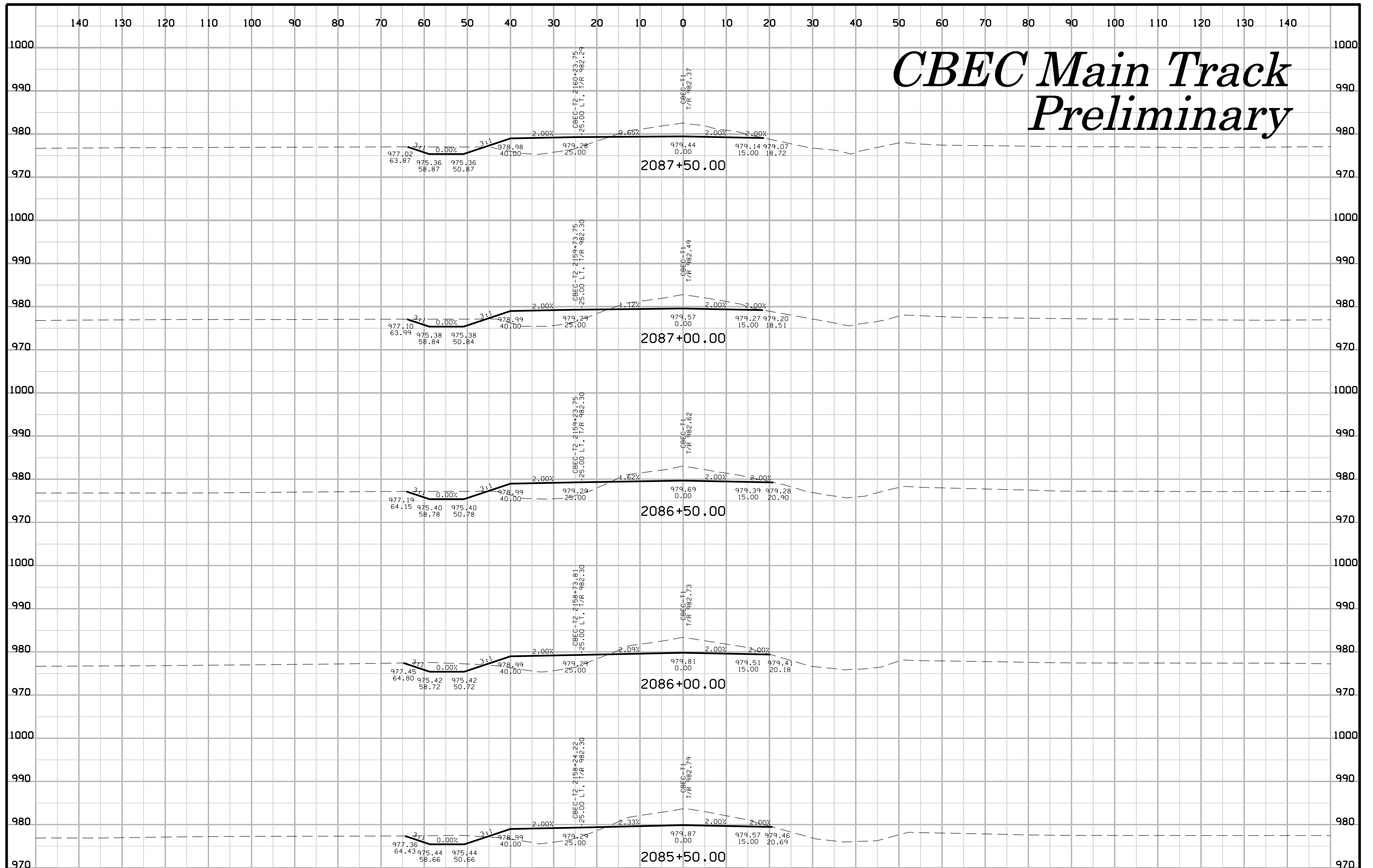
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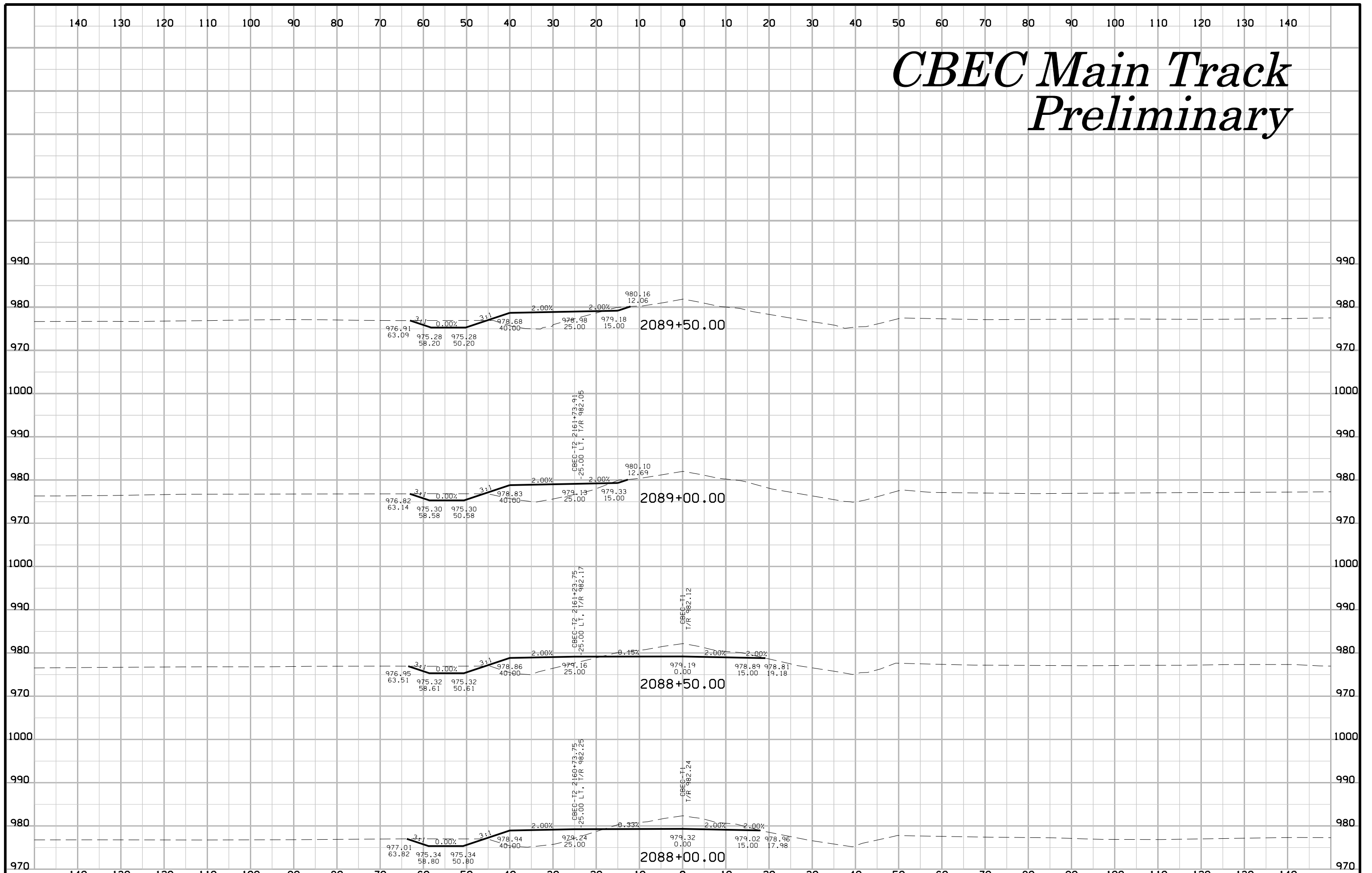
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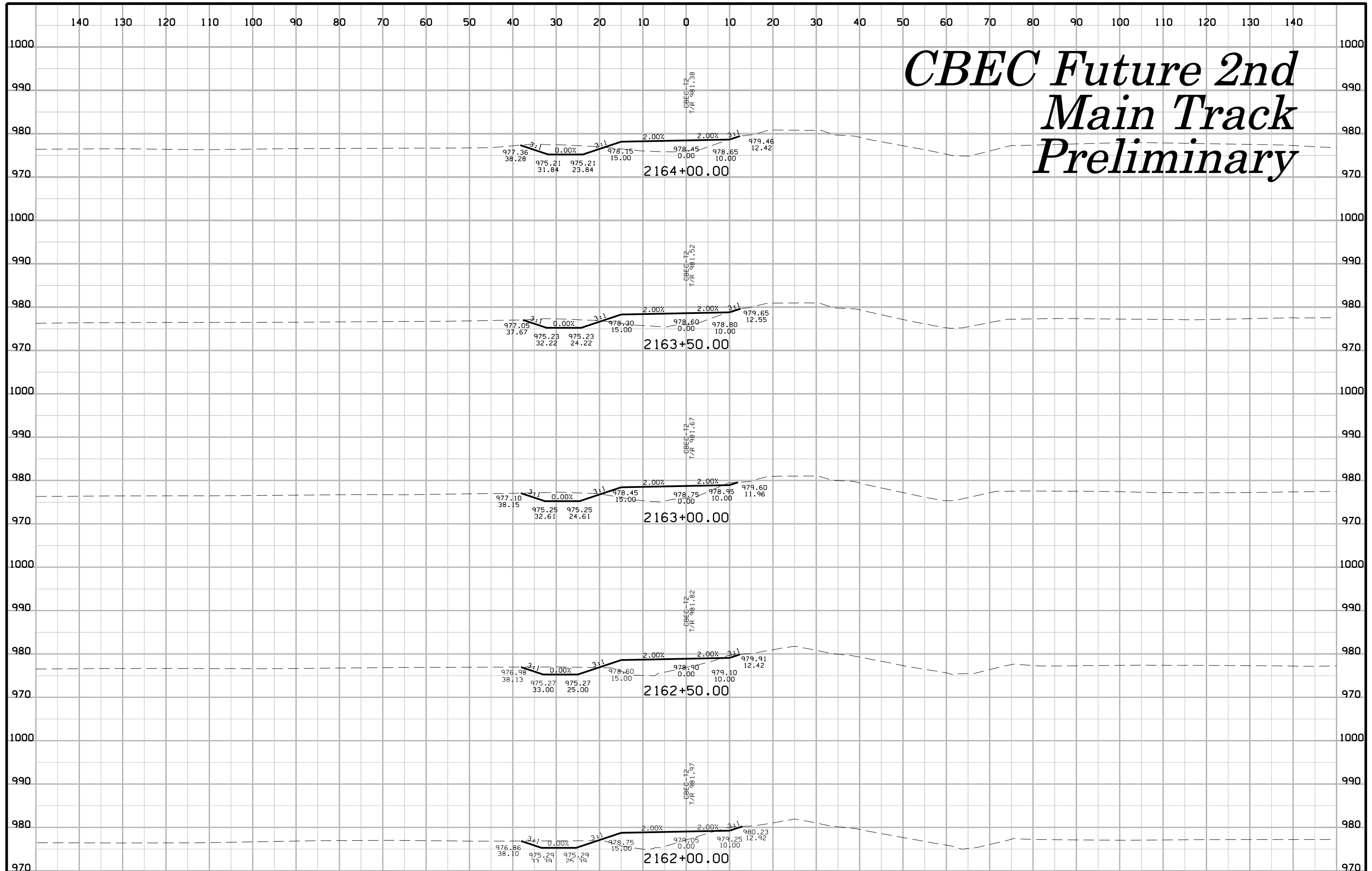
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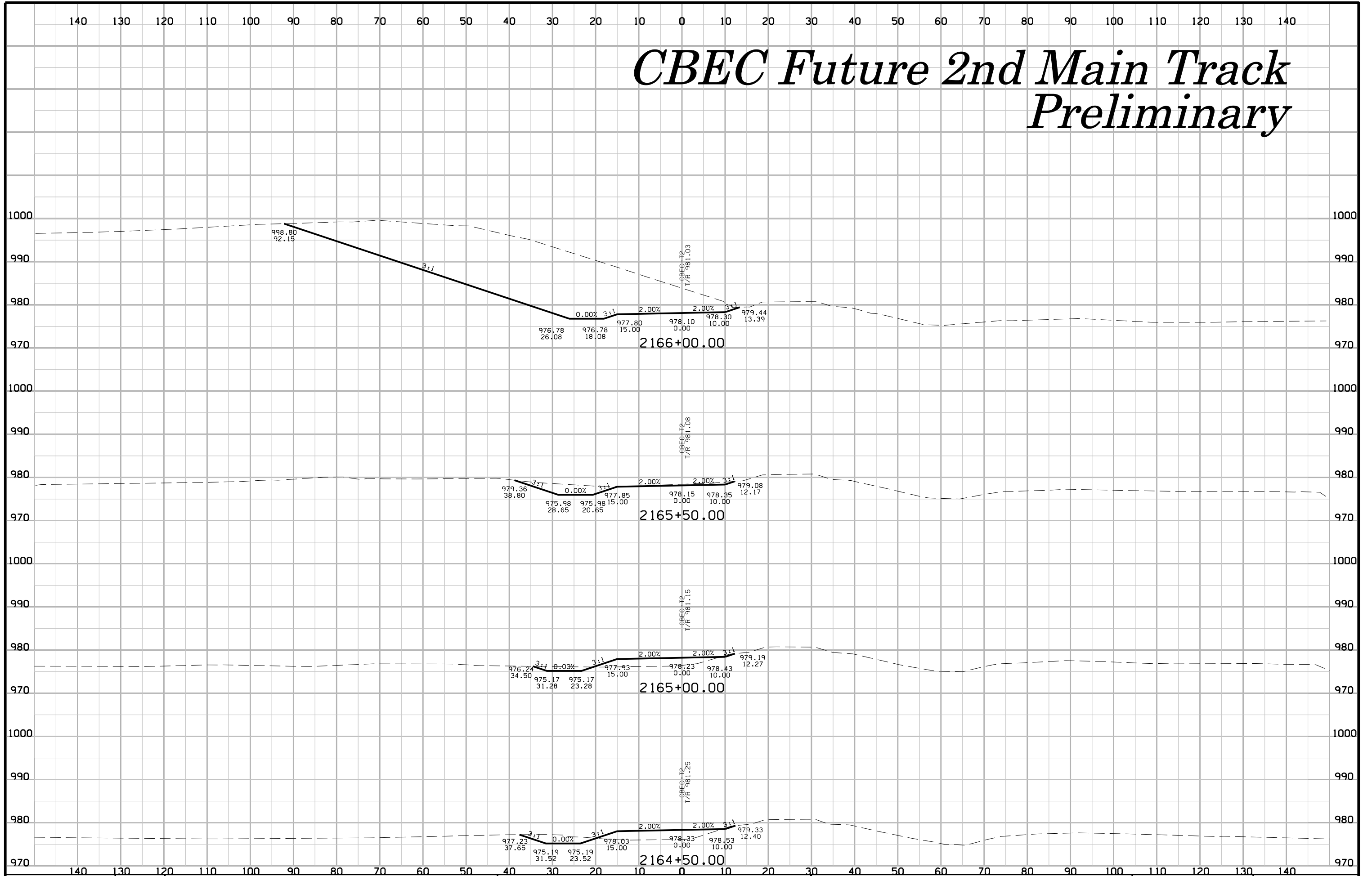
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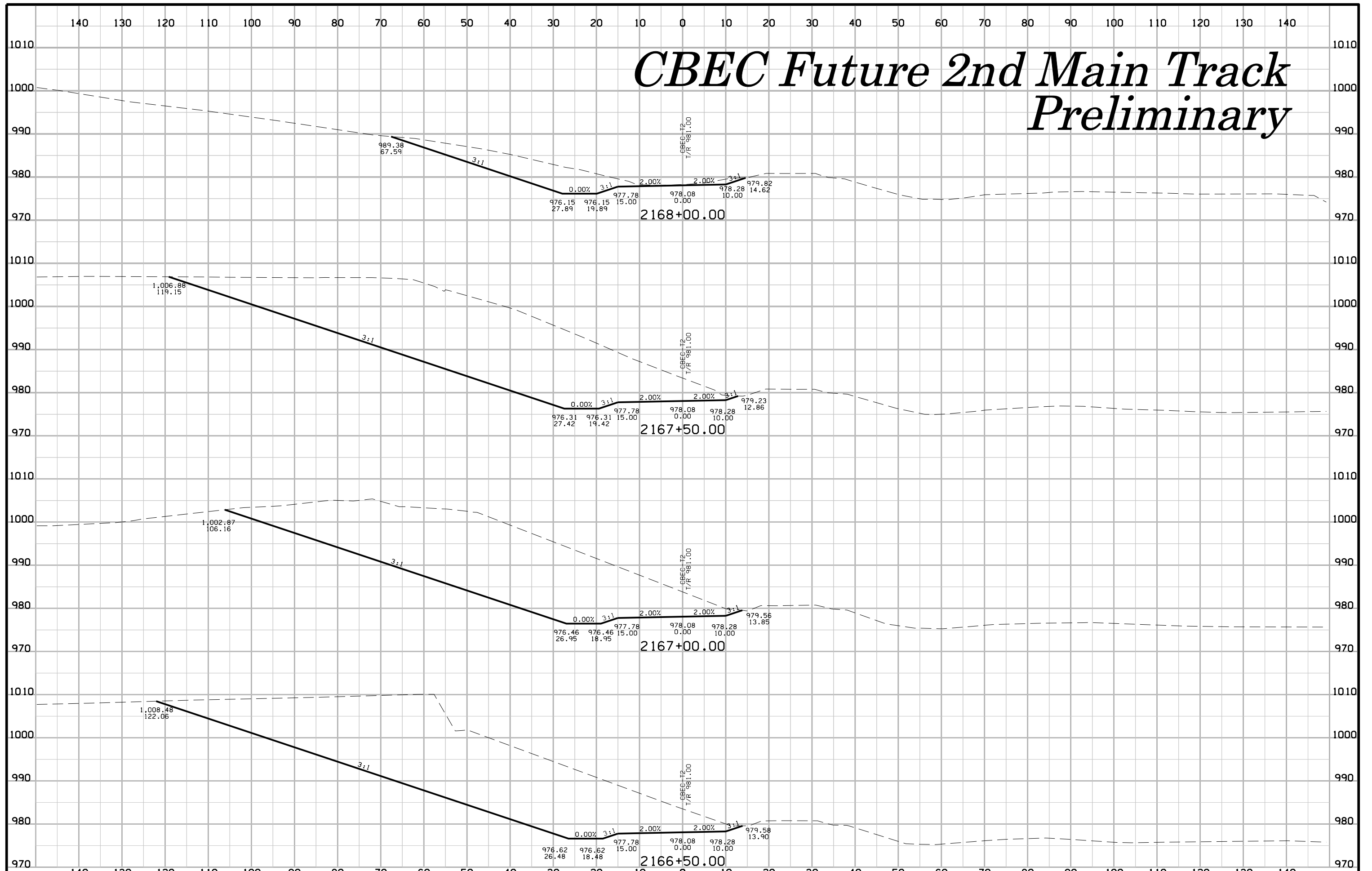
CBEC Future 2nd Main Track Preliminary



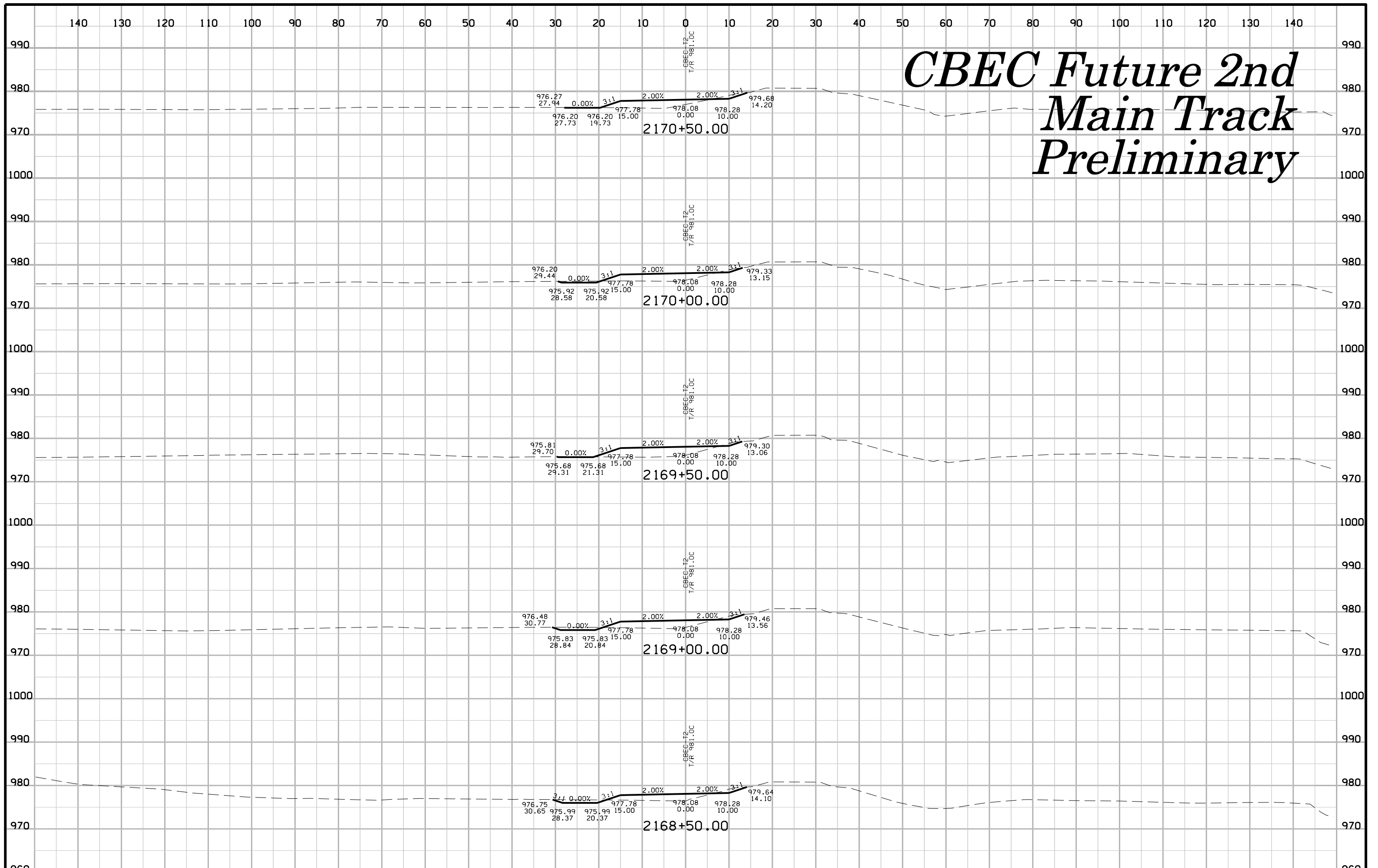
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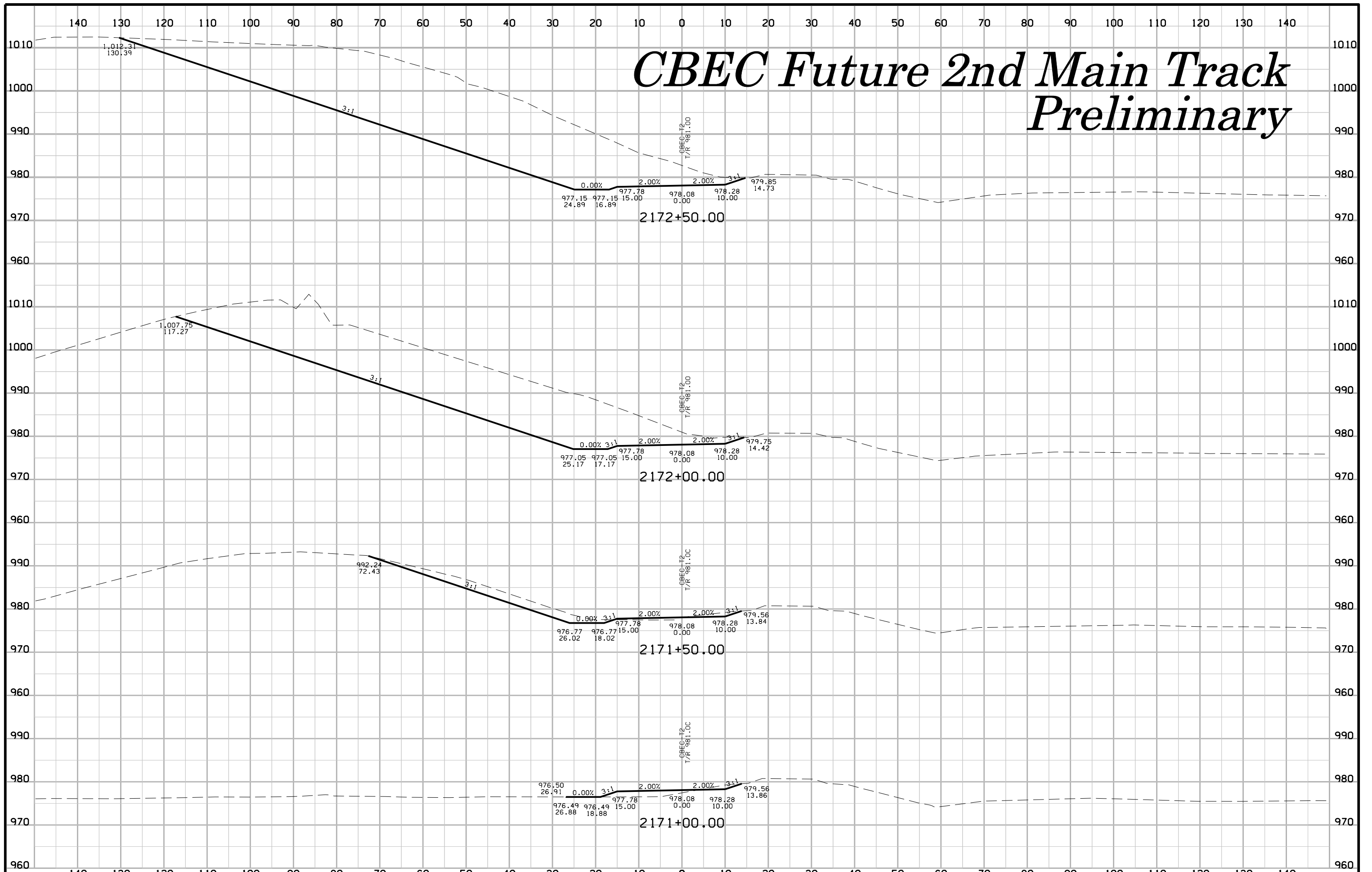
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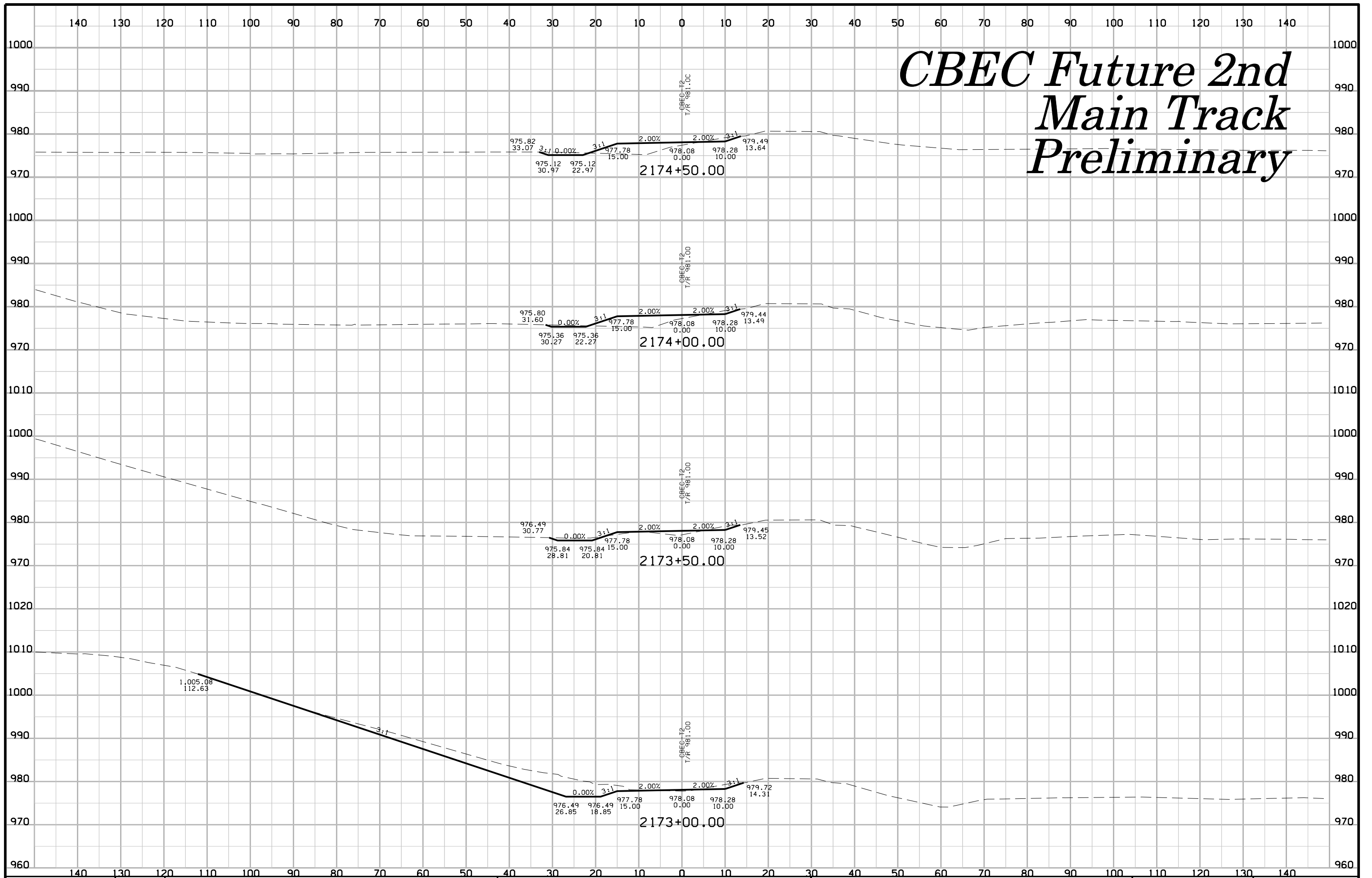
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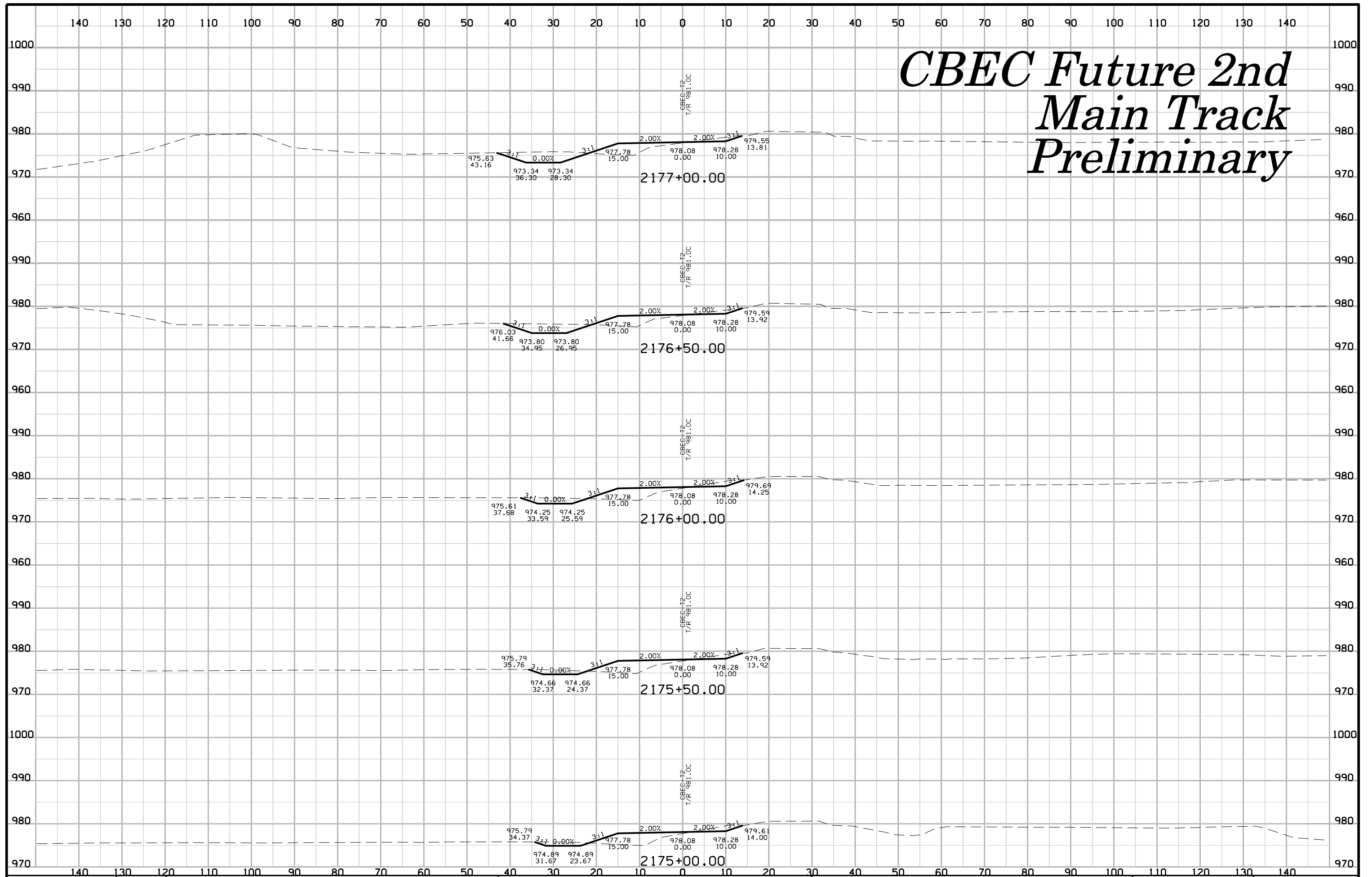
CBEC Future 2nd Main Track Preliminary



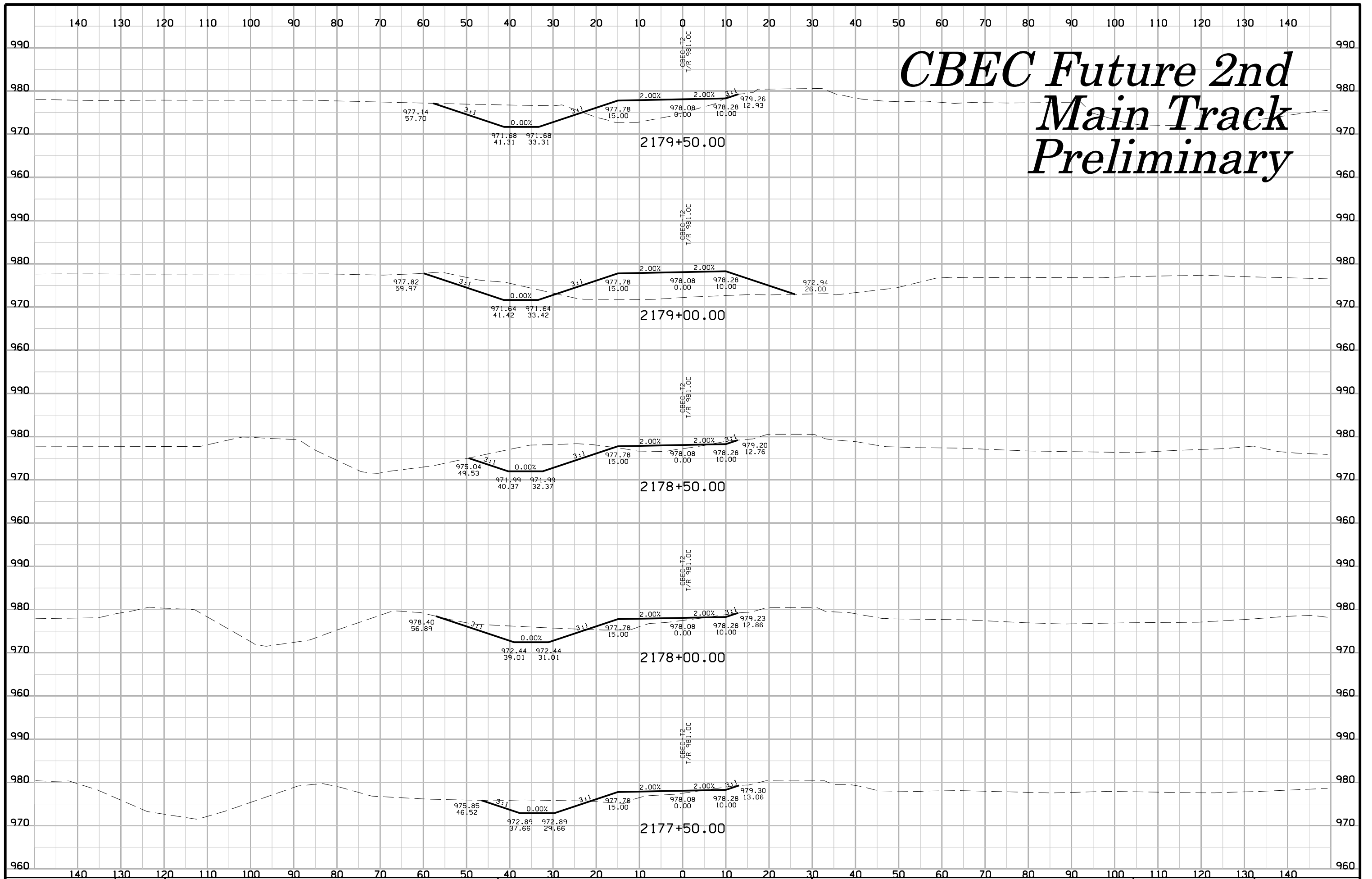
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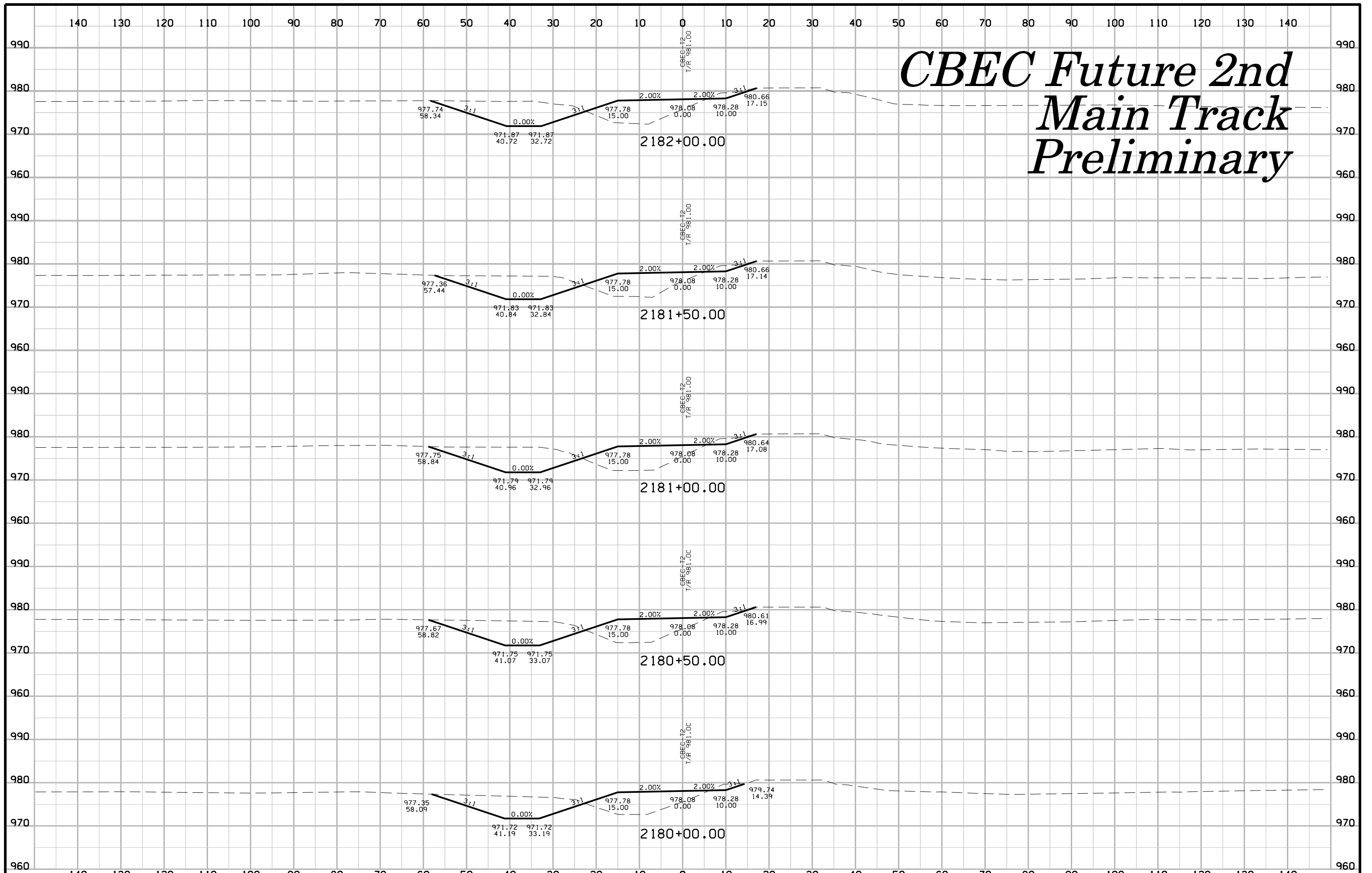
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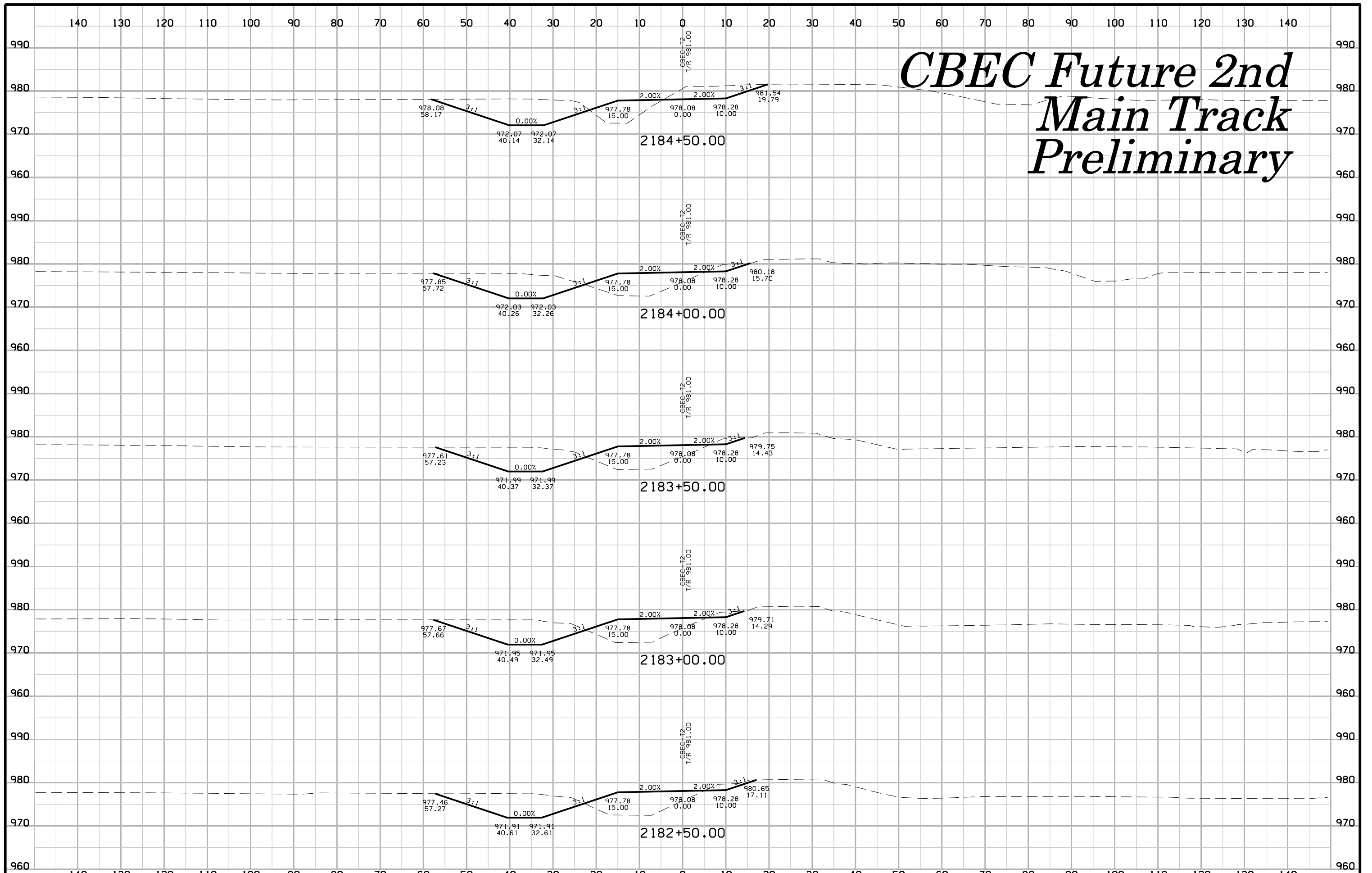
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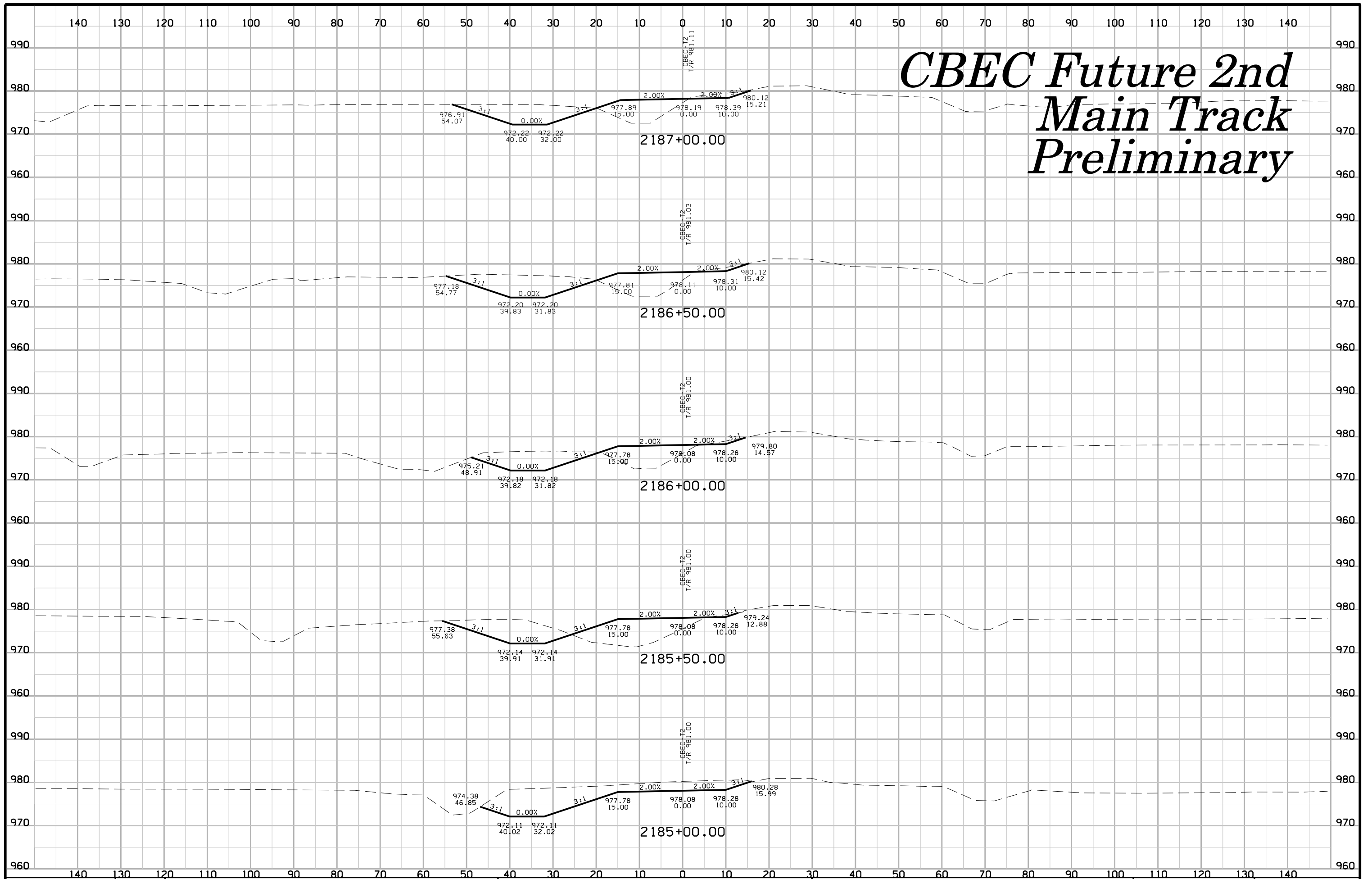
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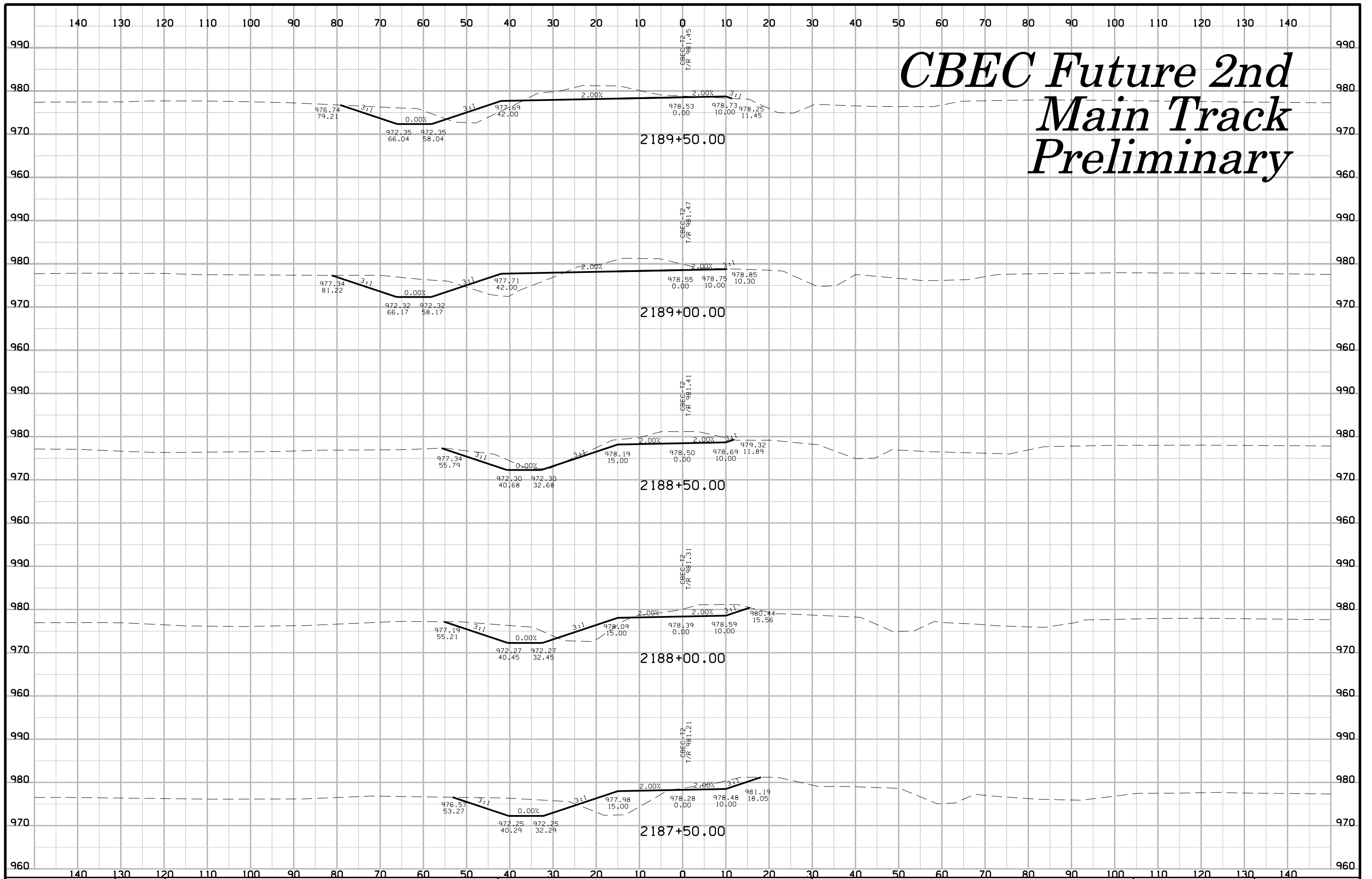
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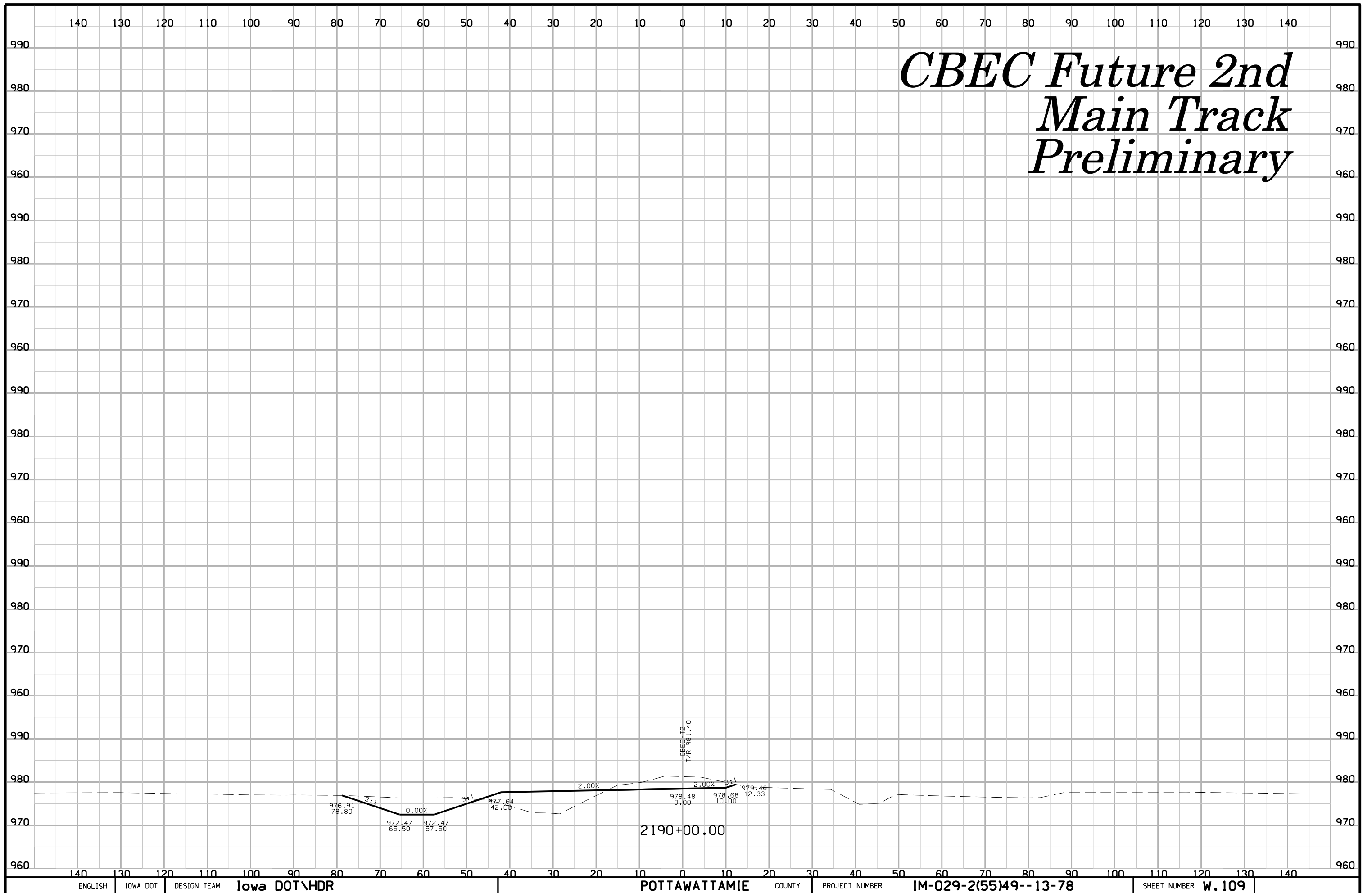
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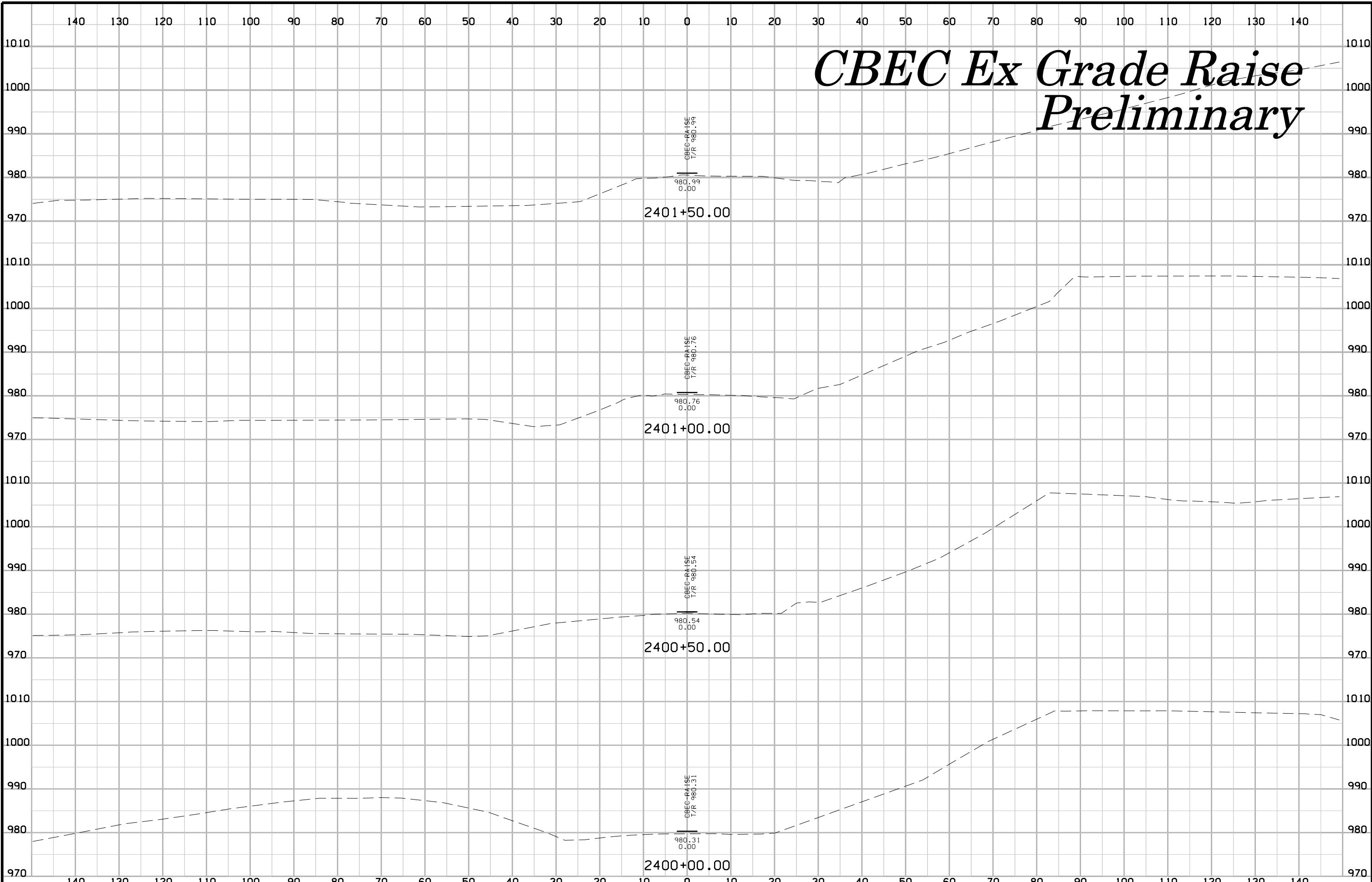
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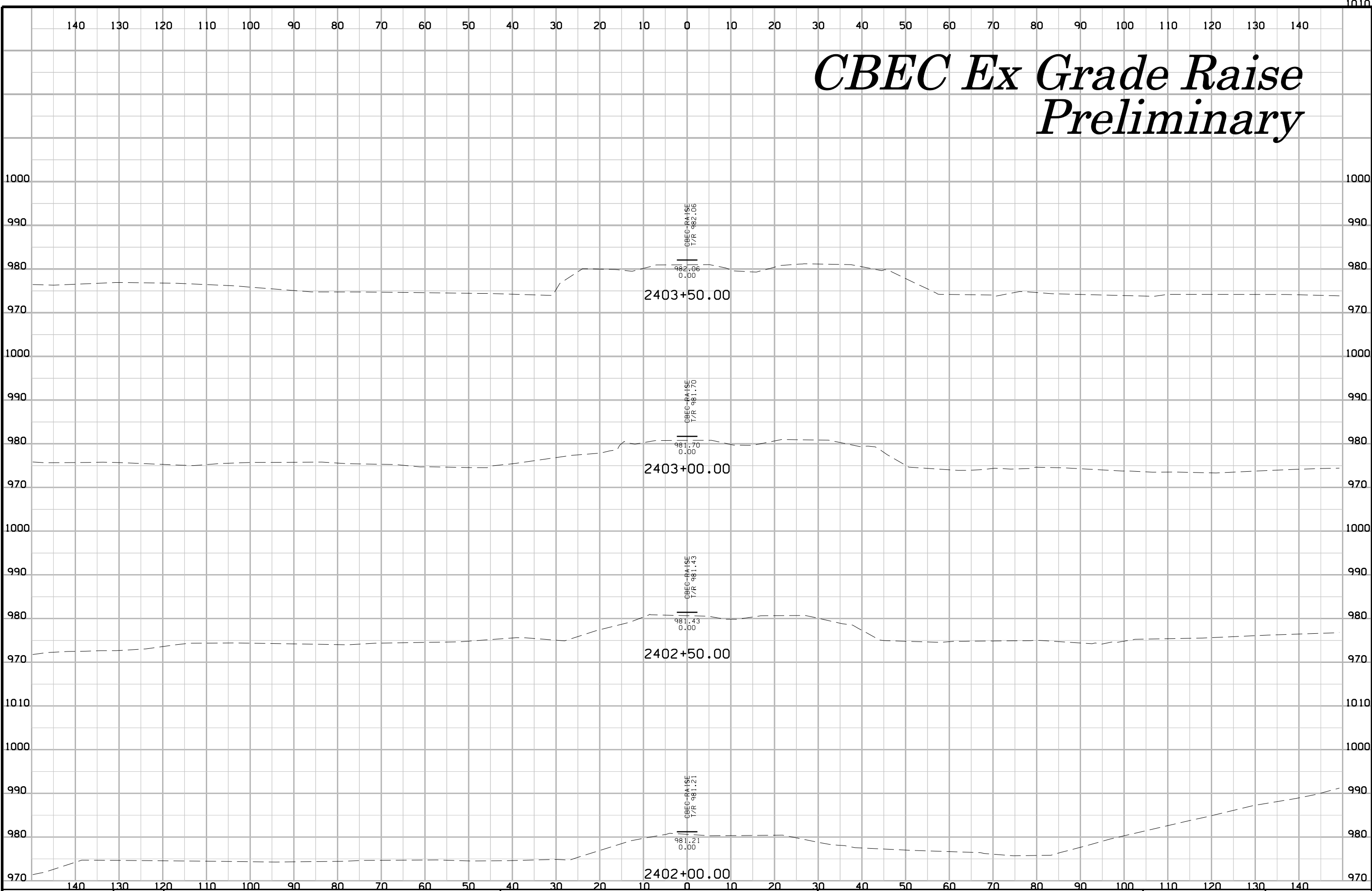
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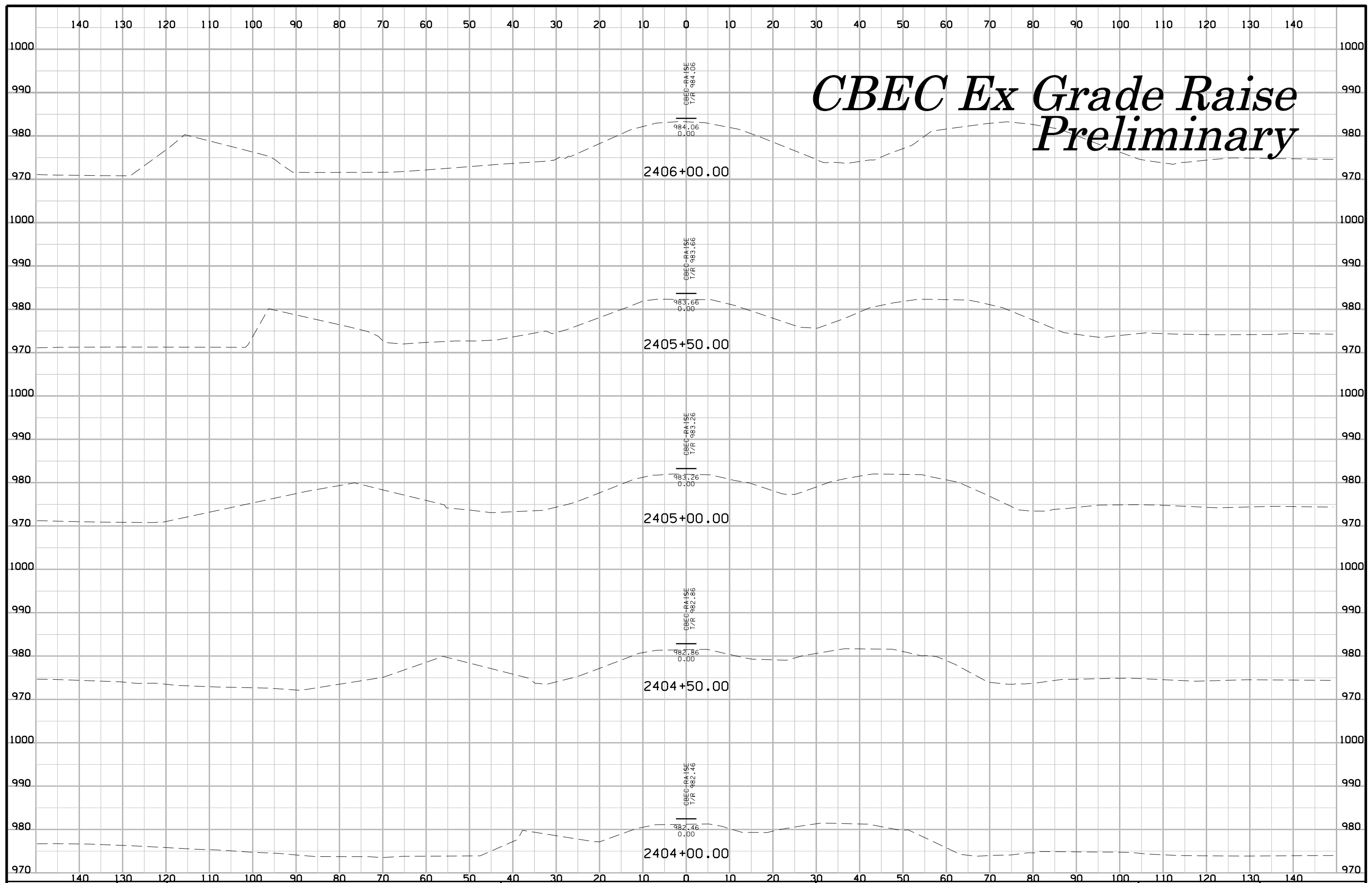


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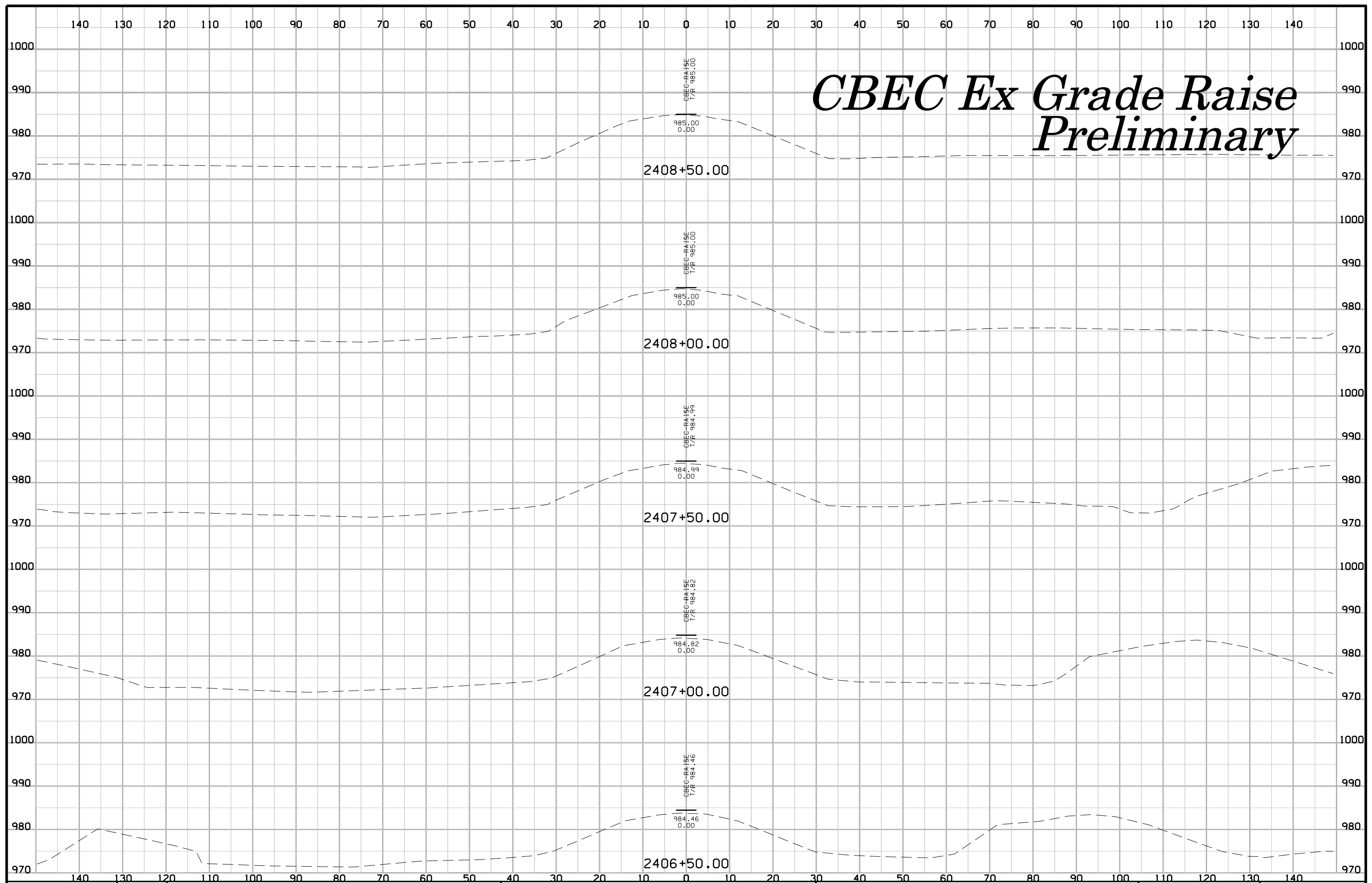
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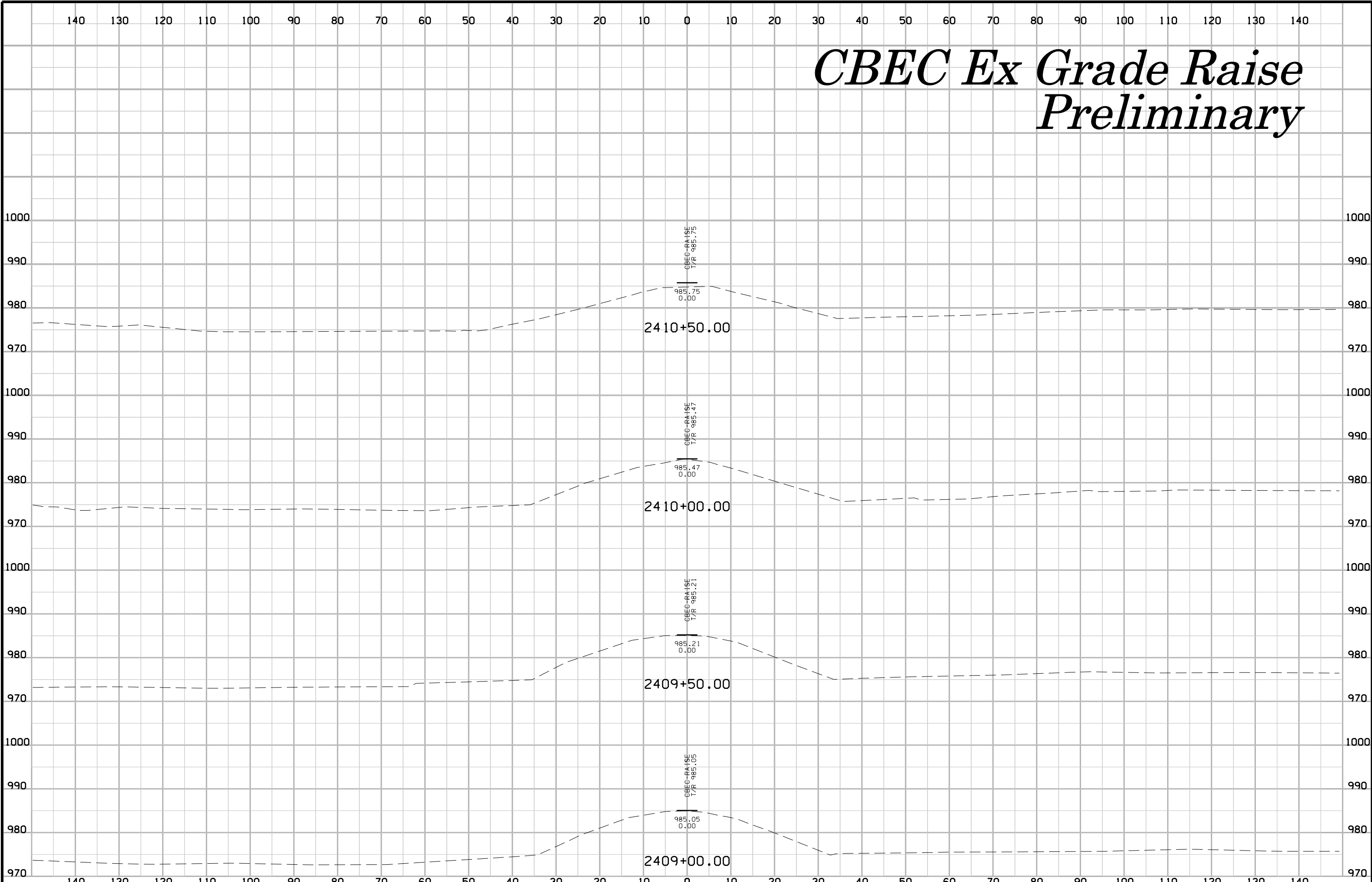


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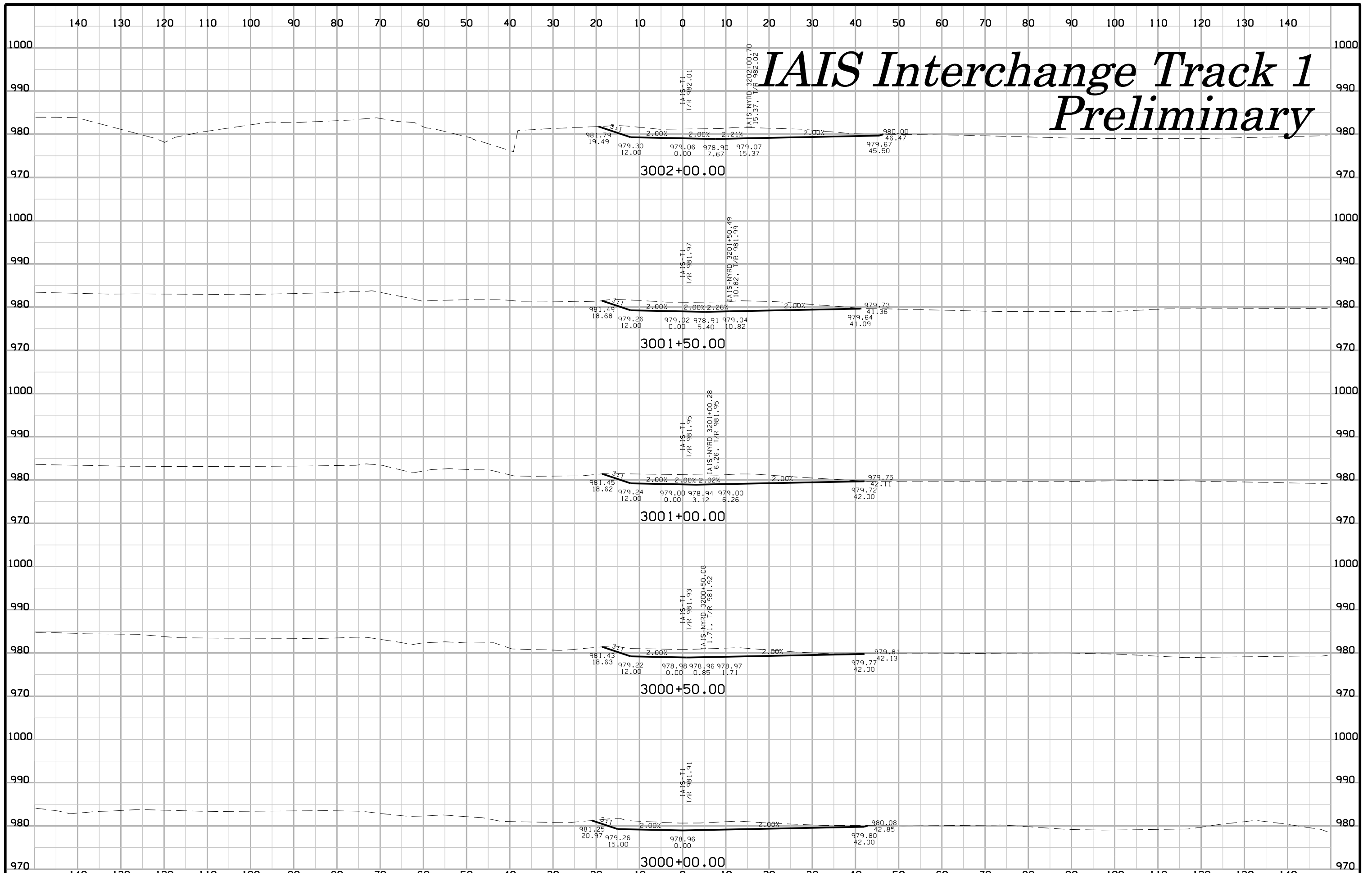
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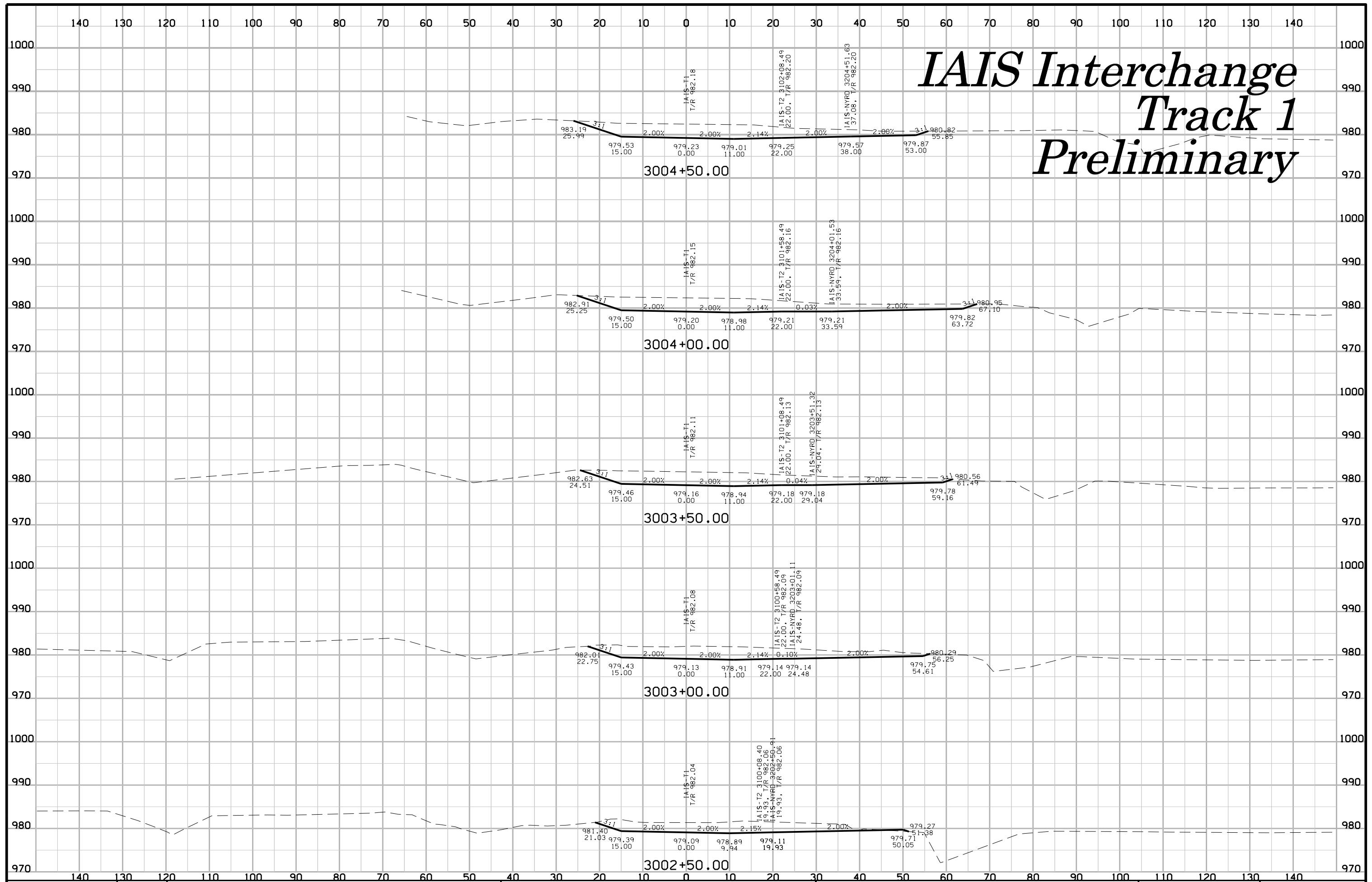
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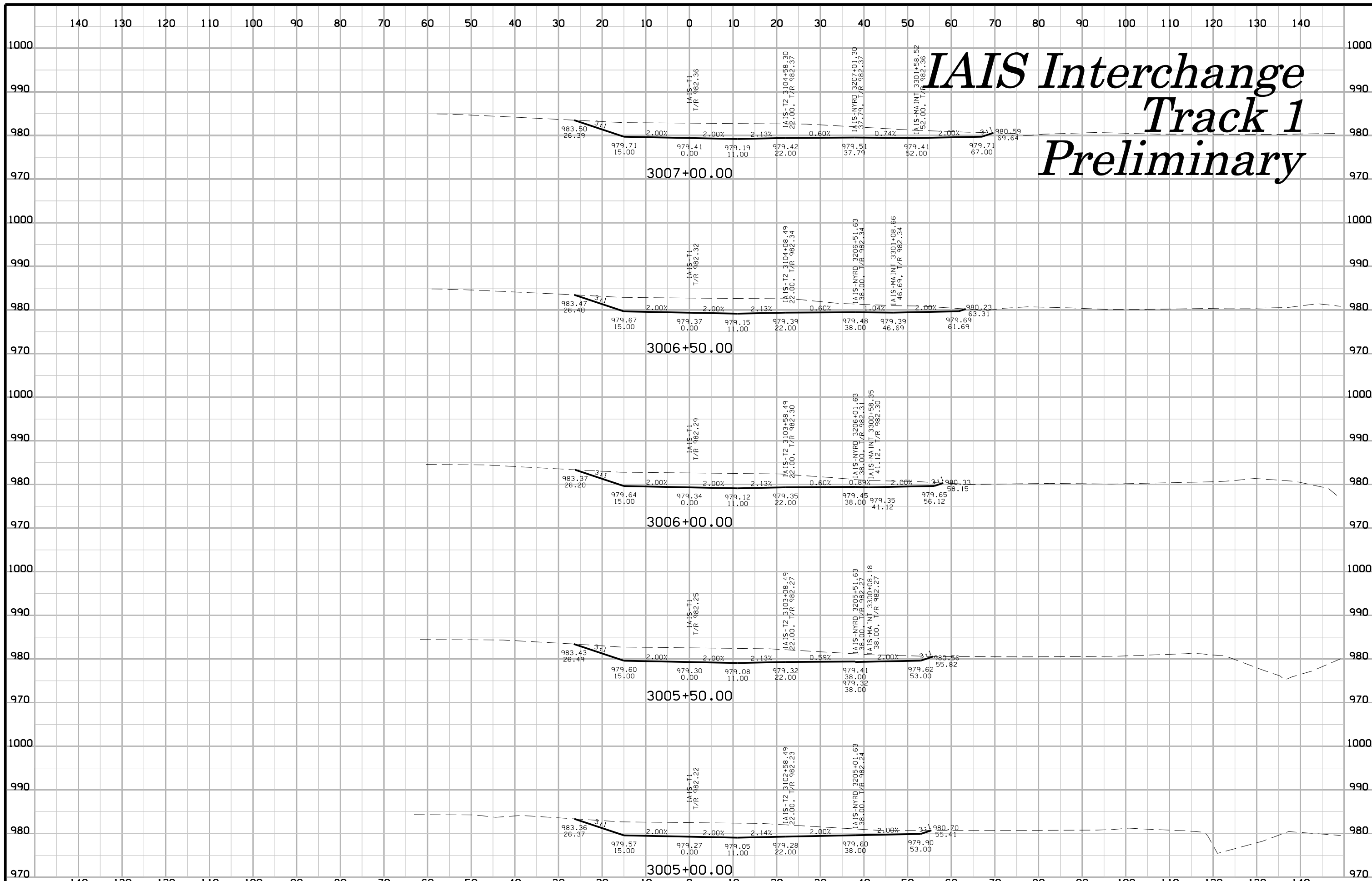


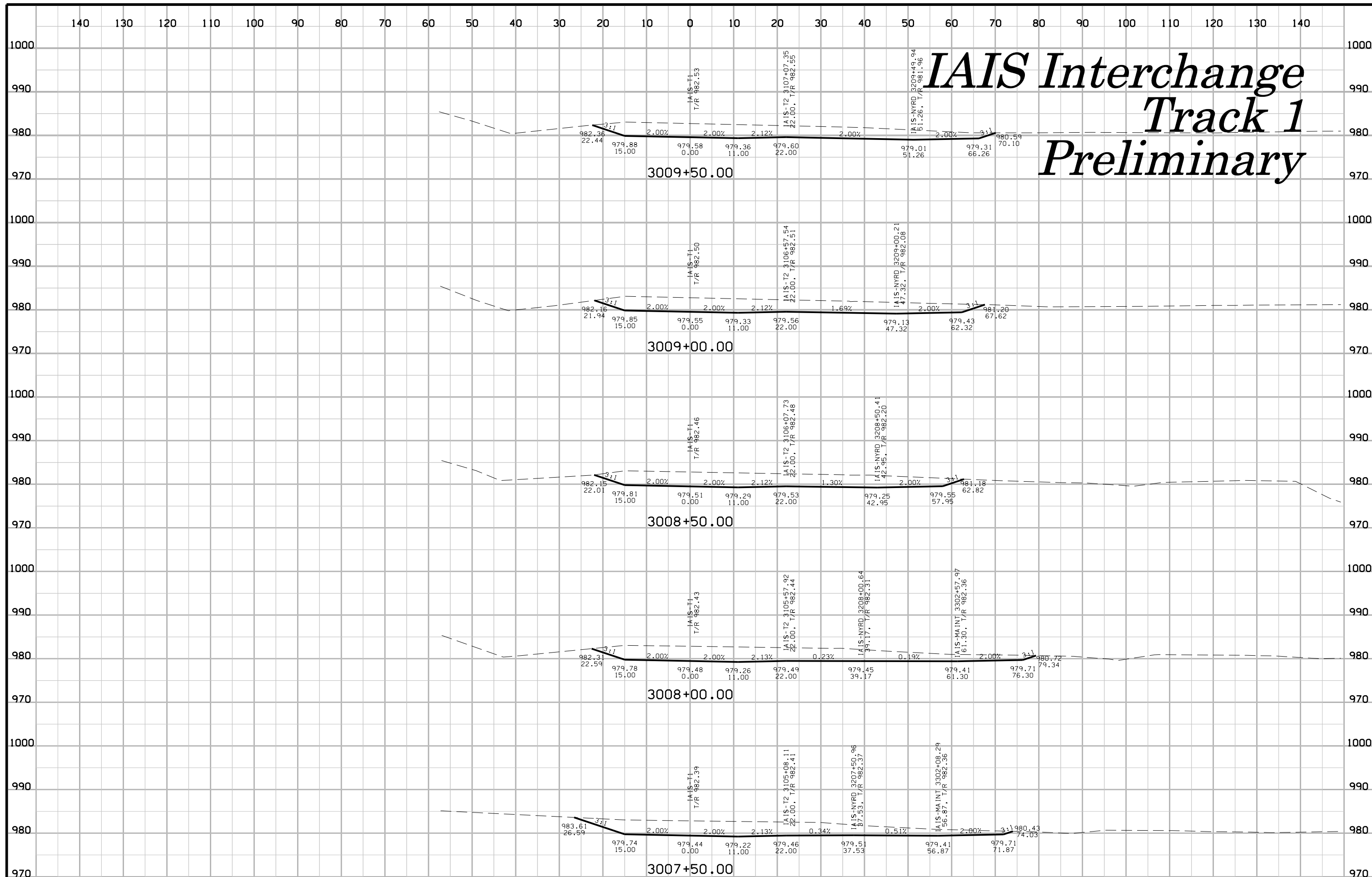
IAIS Interchange Track 1 Preliminary



IAIS Interchange Track 1 Preliminary

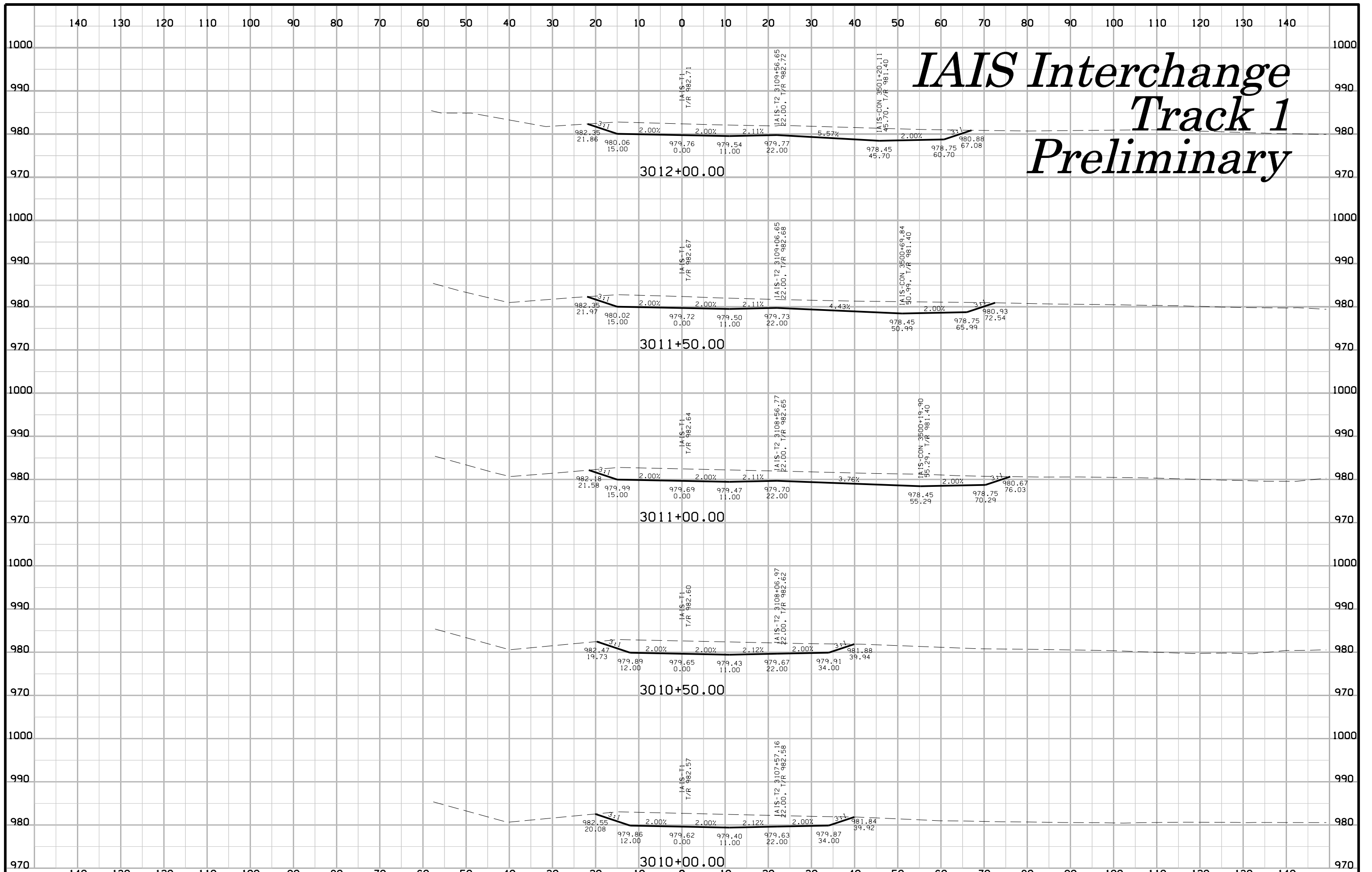




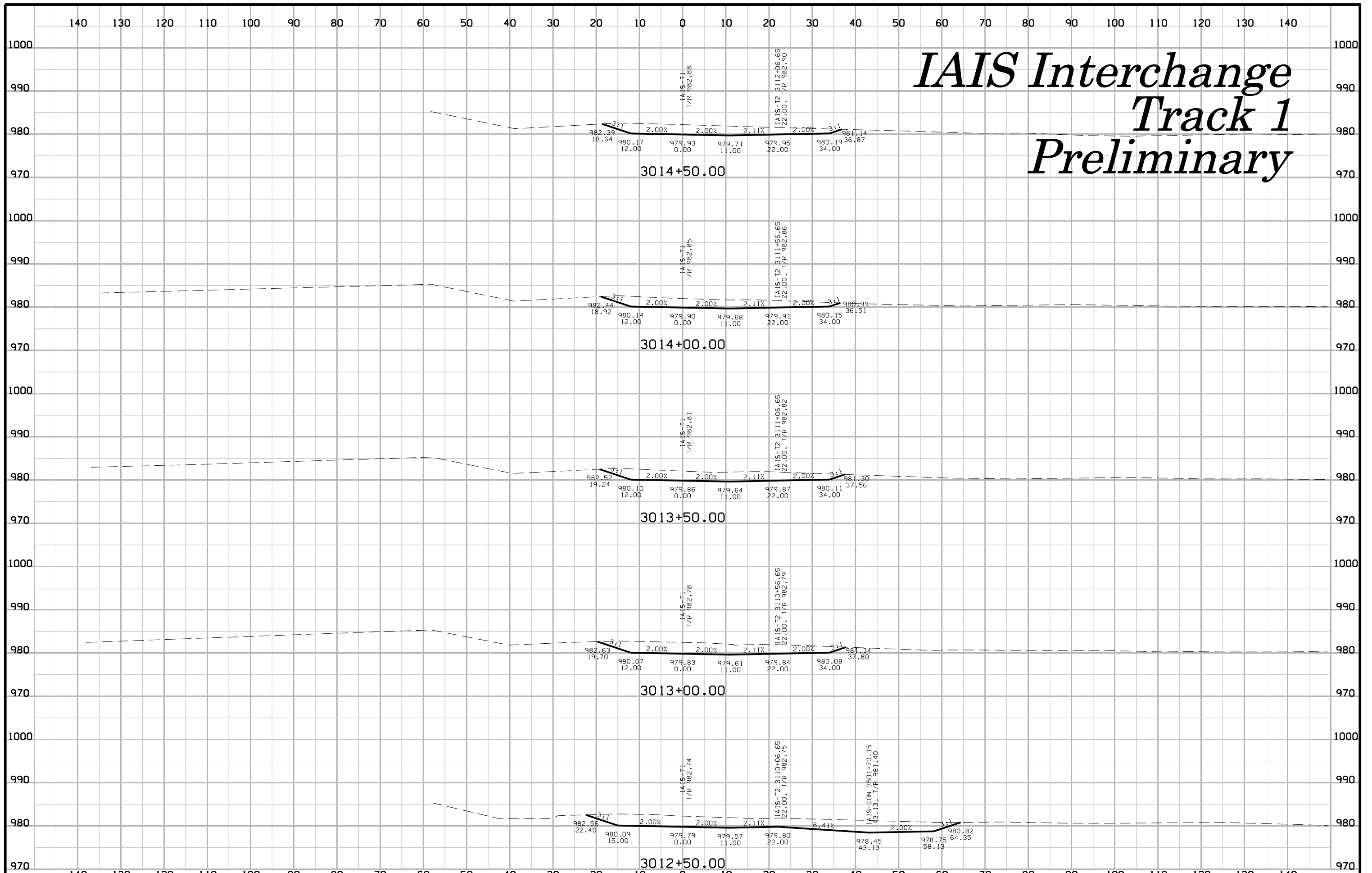


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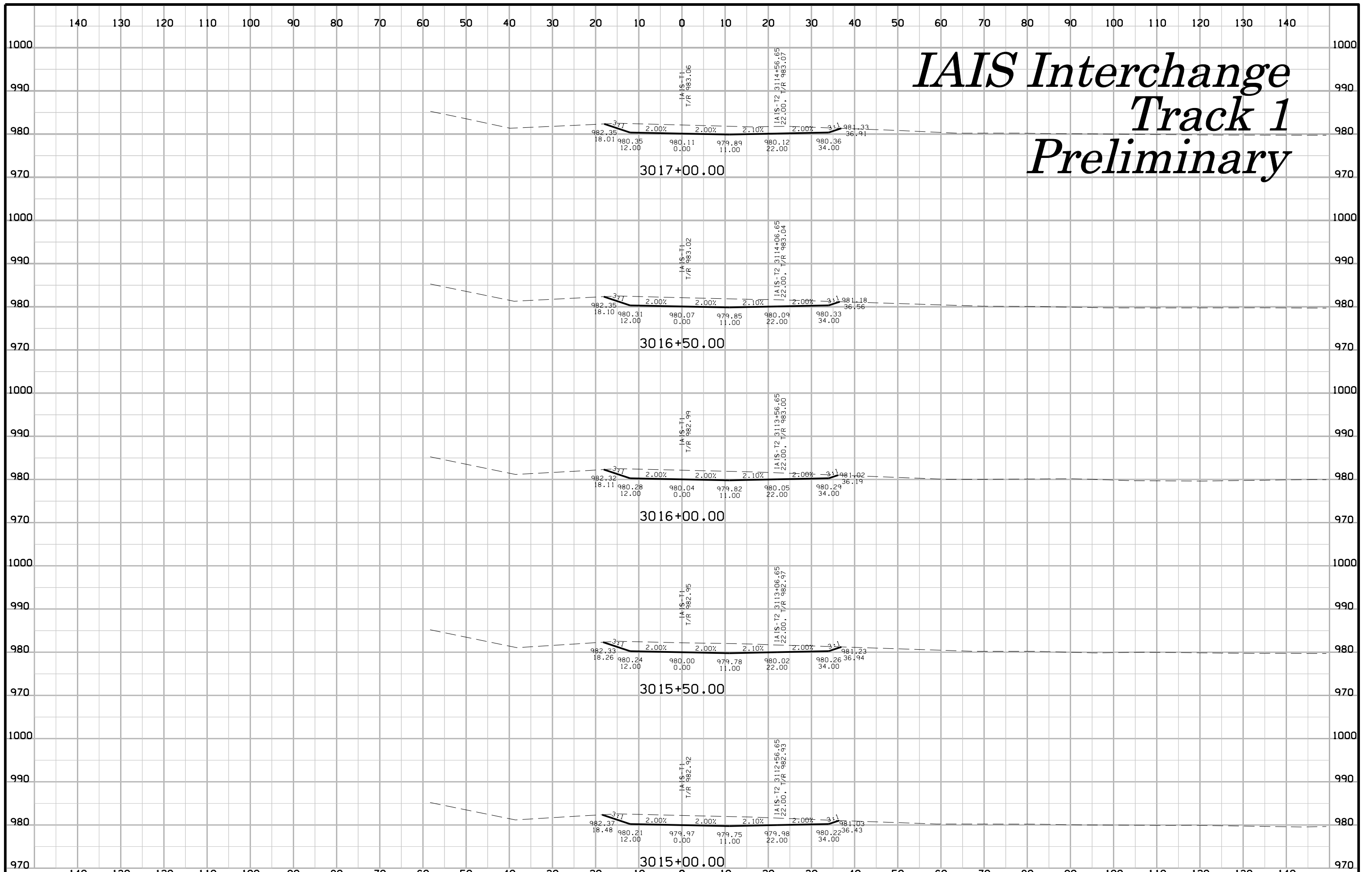
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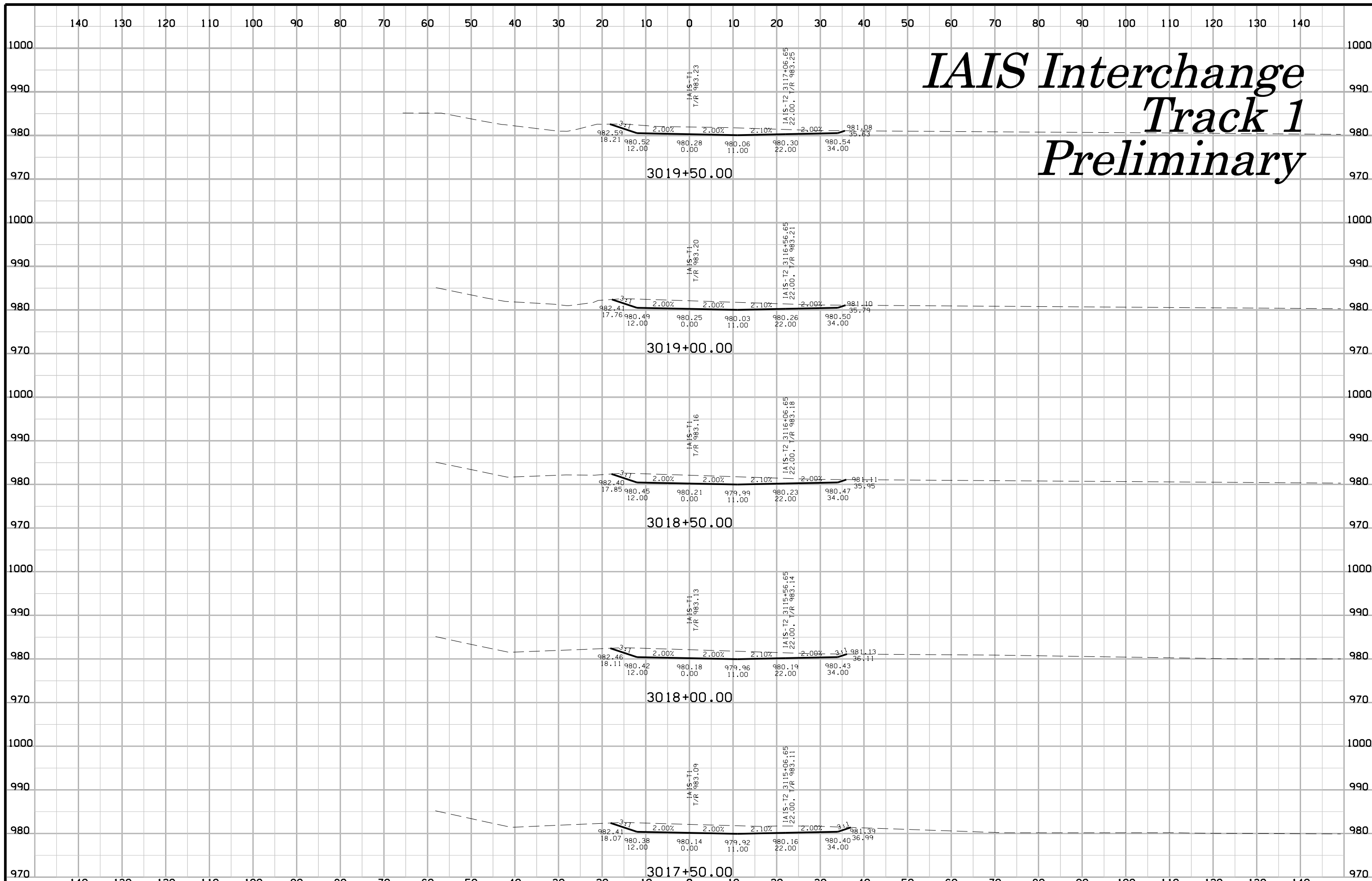
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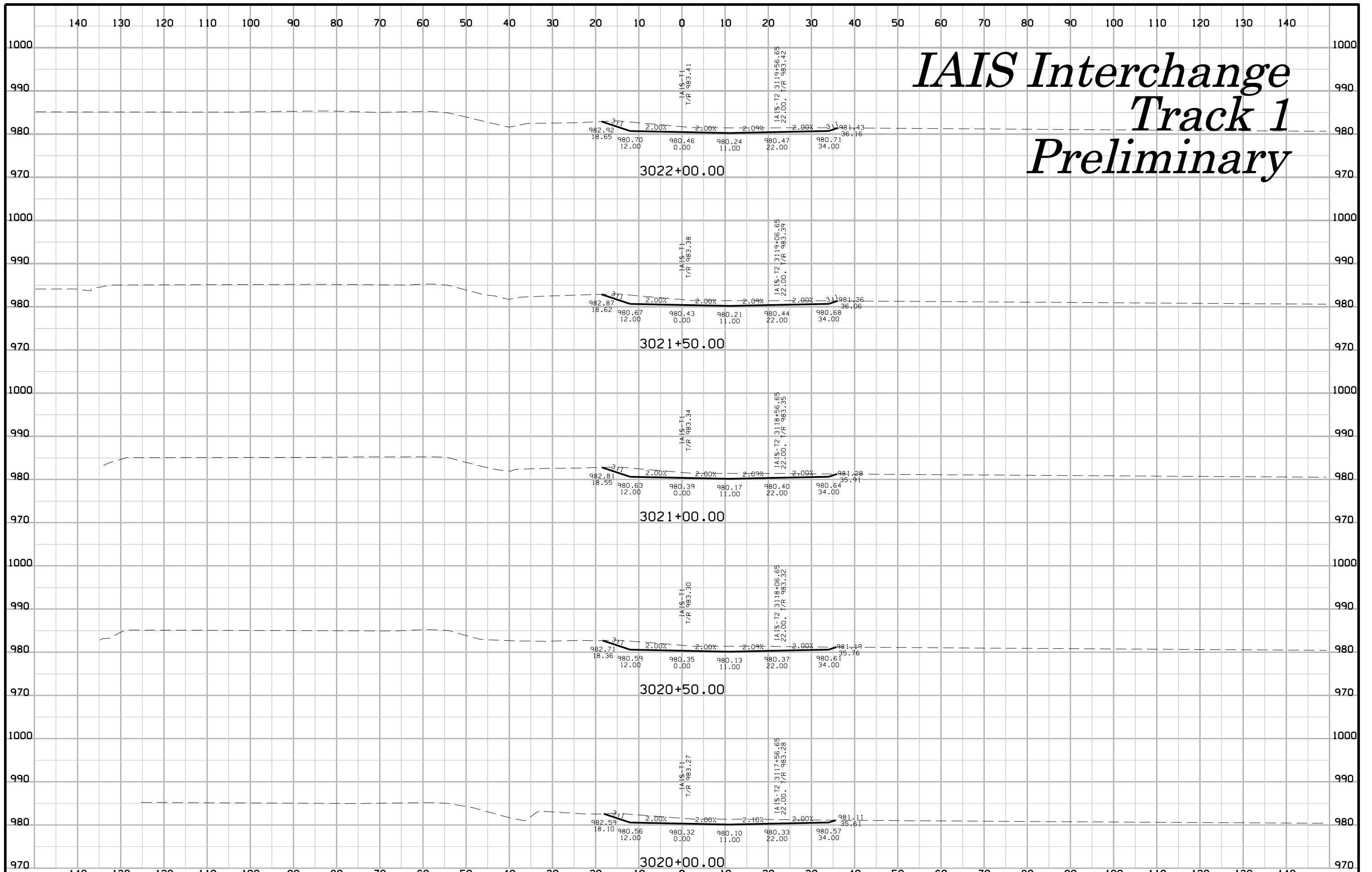
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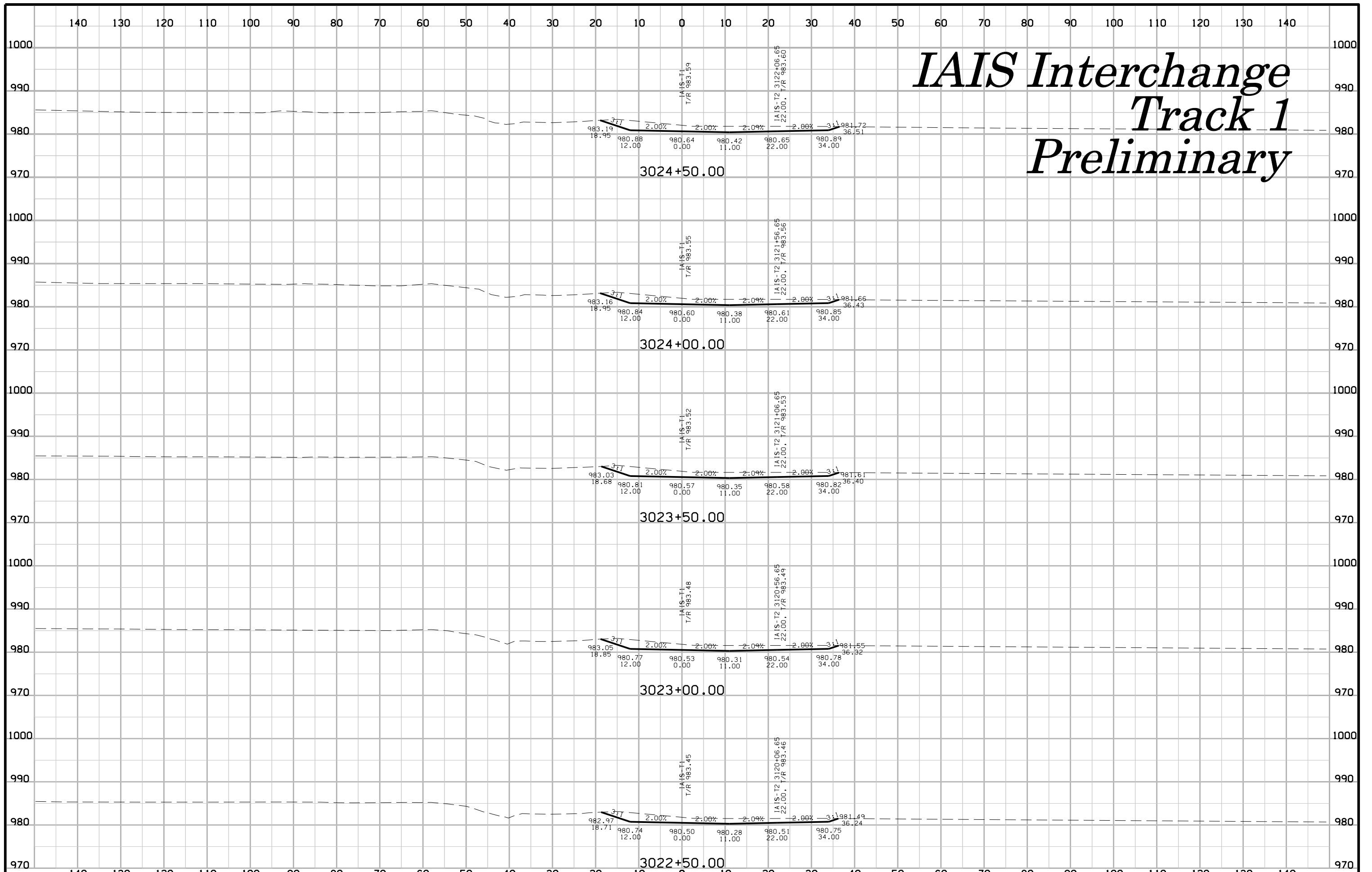
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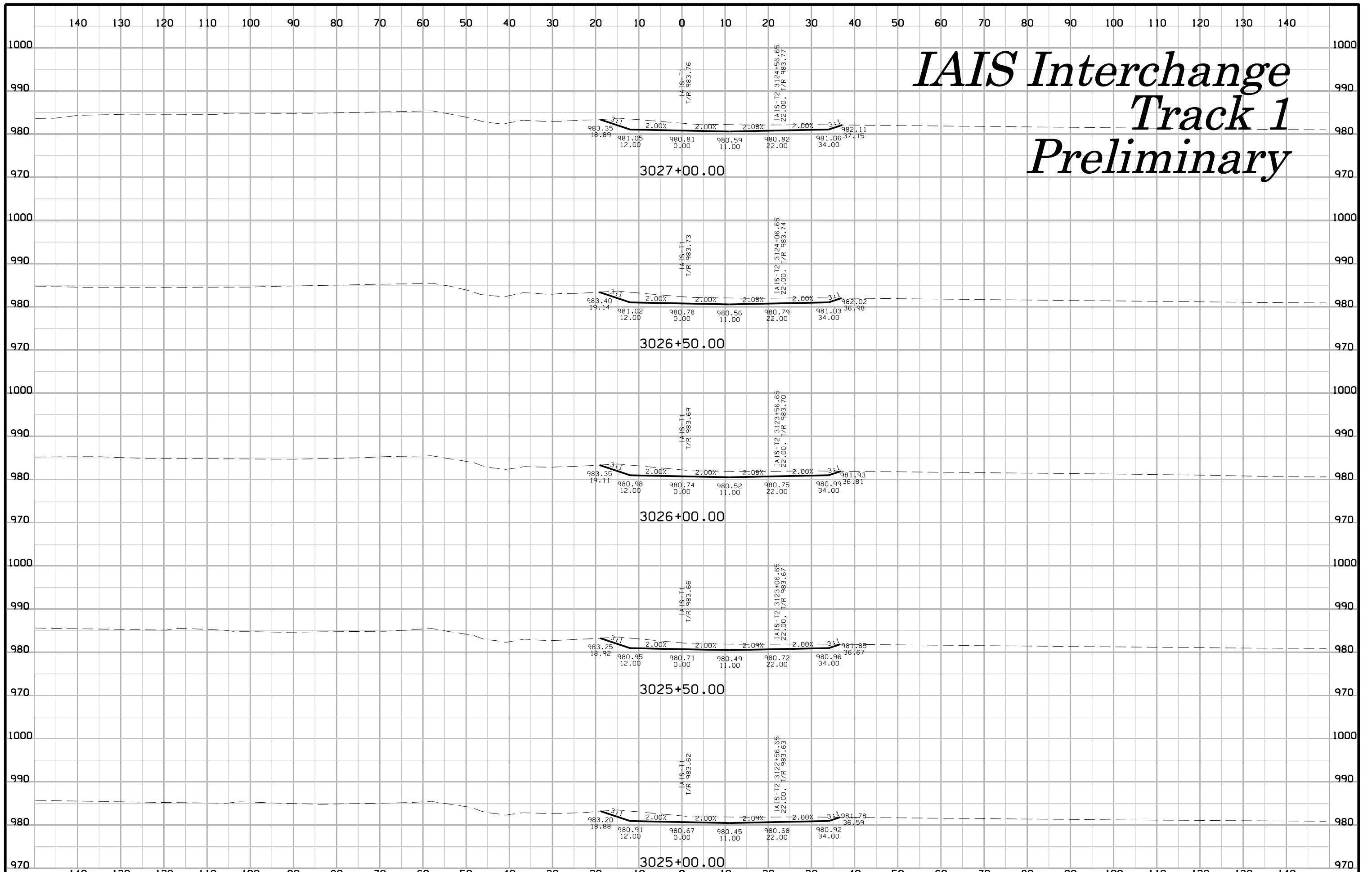
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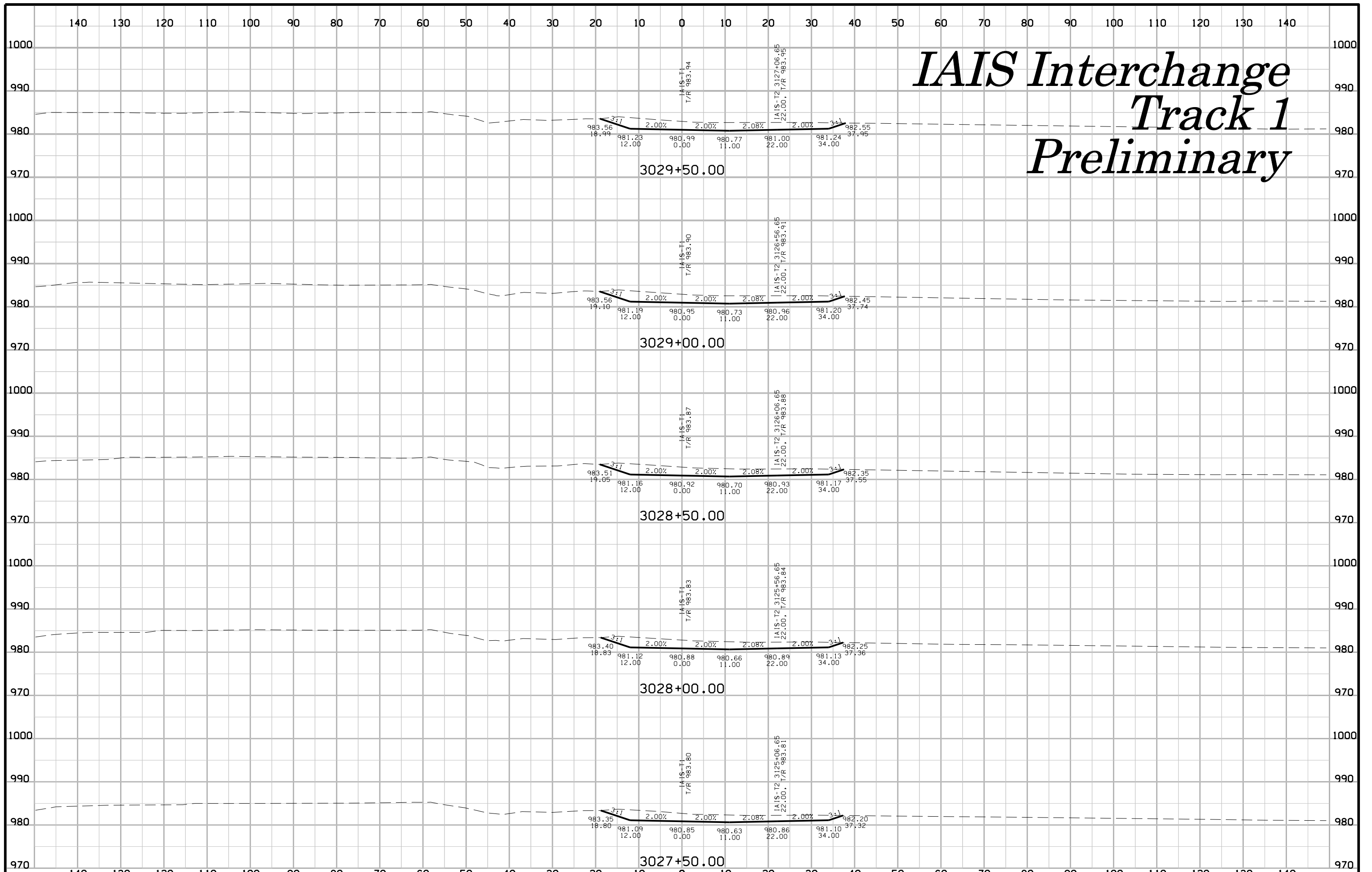
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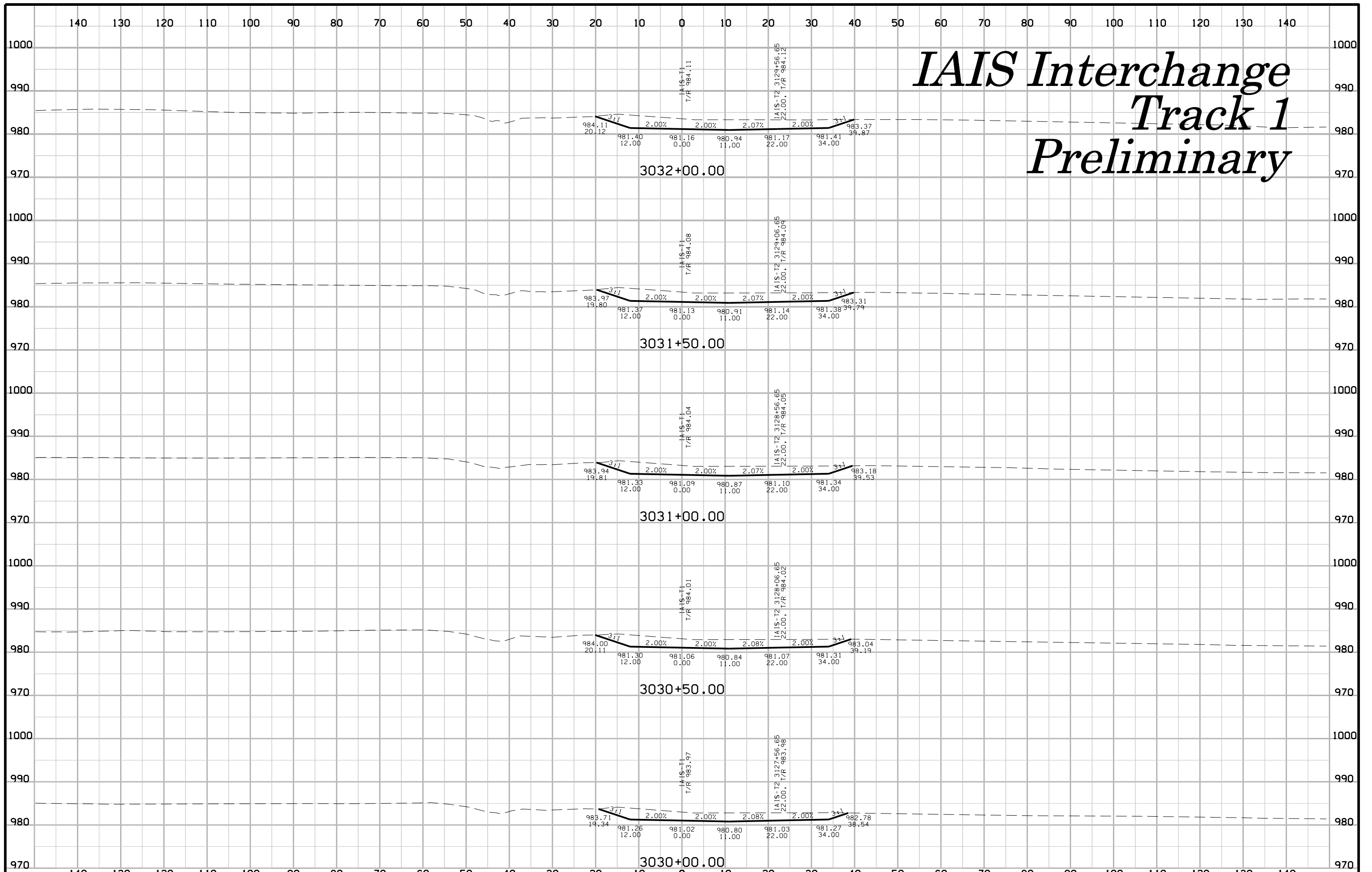
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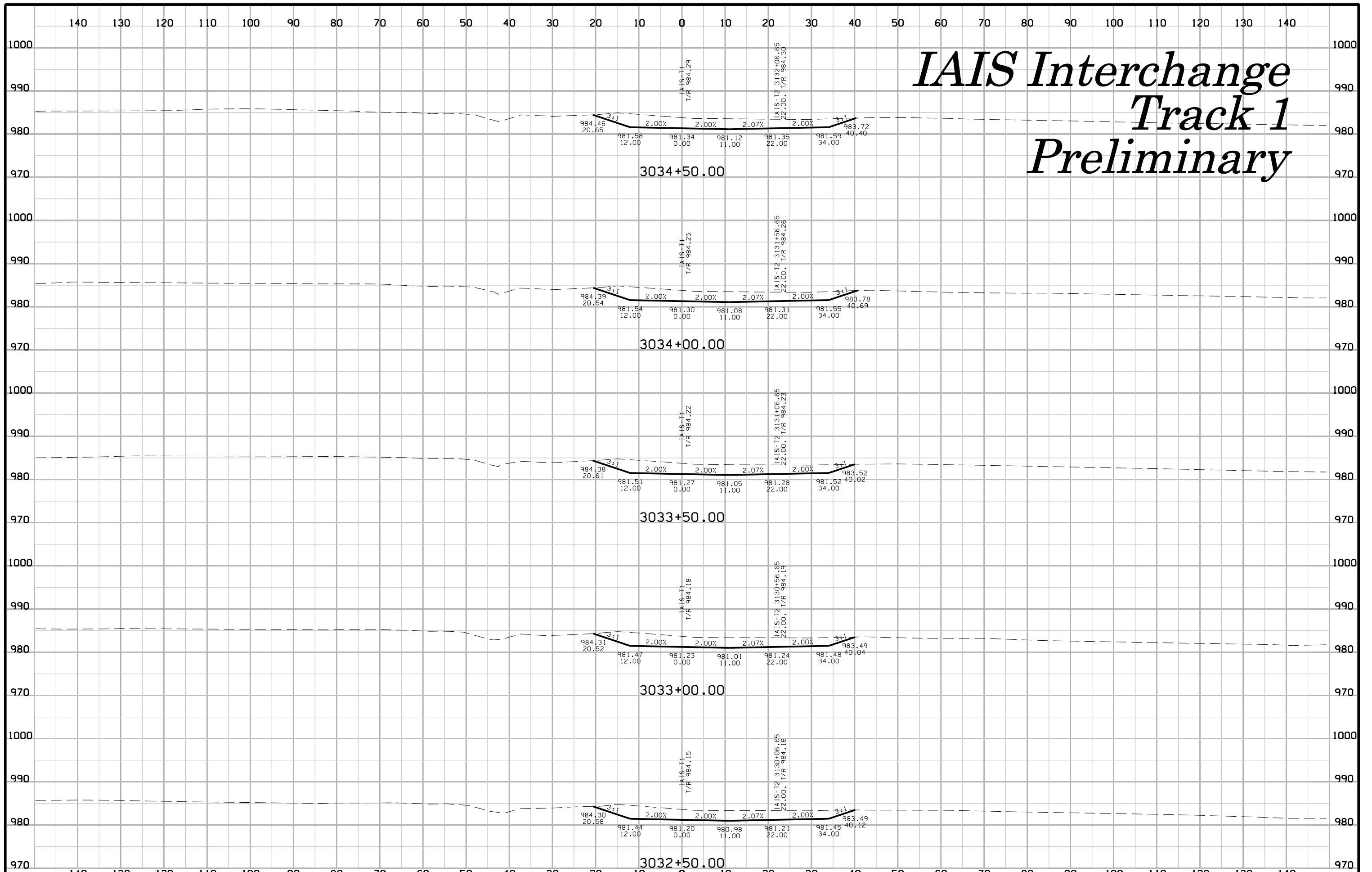
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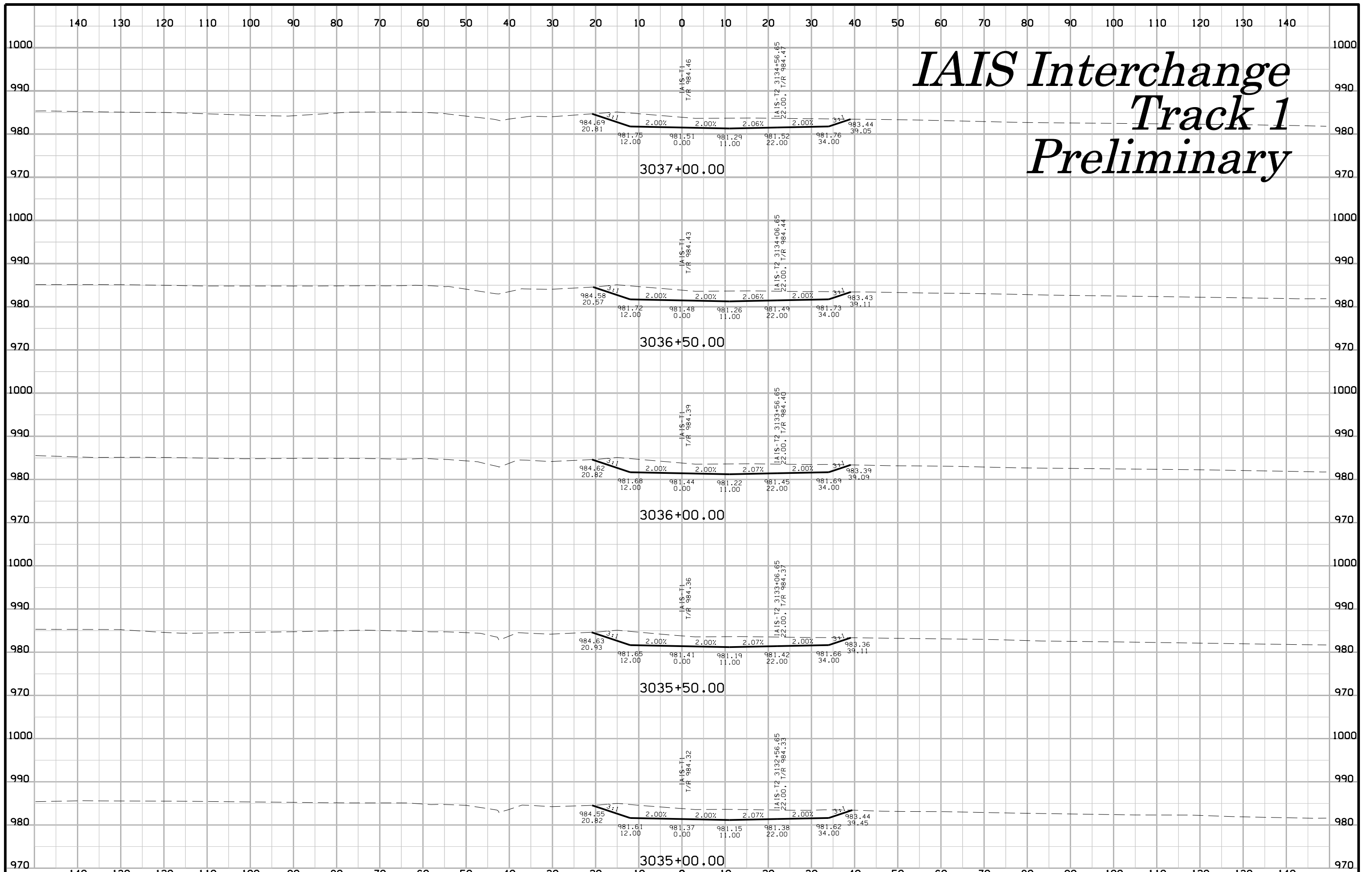
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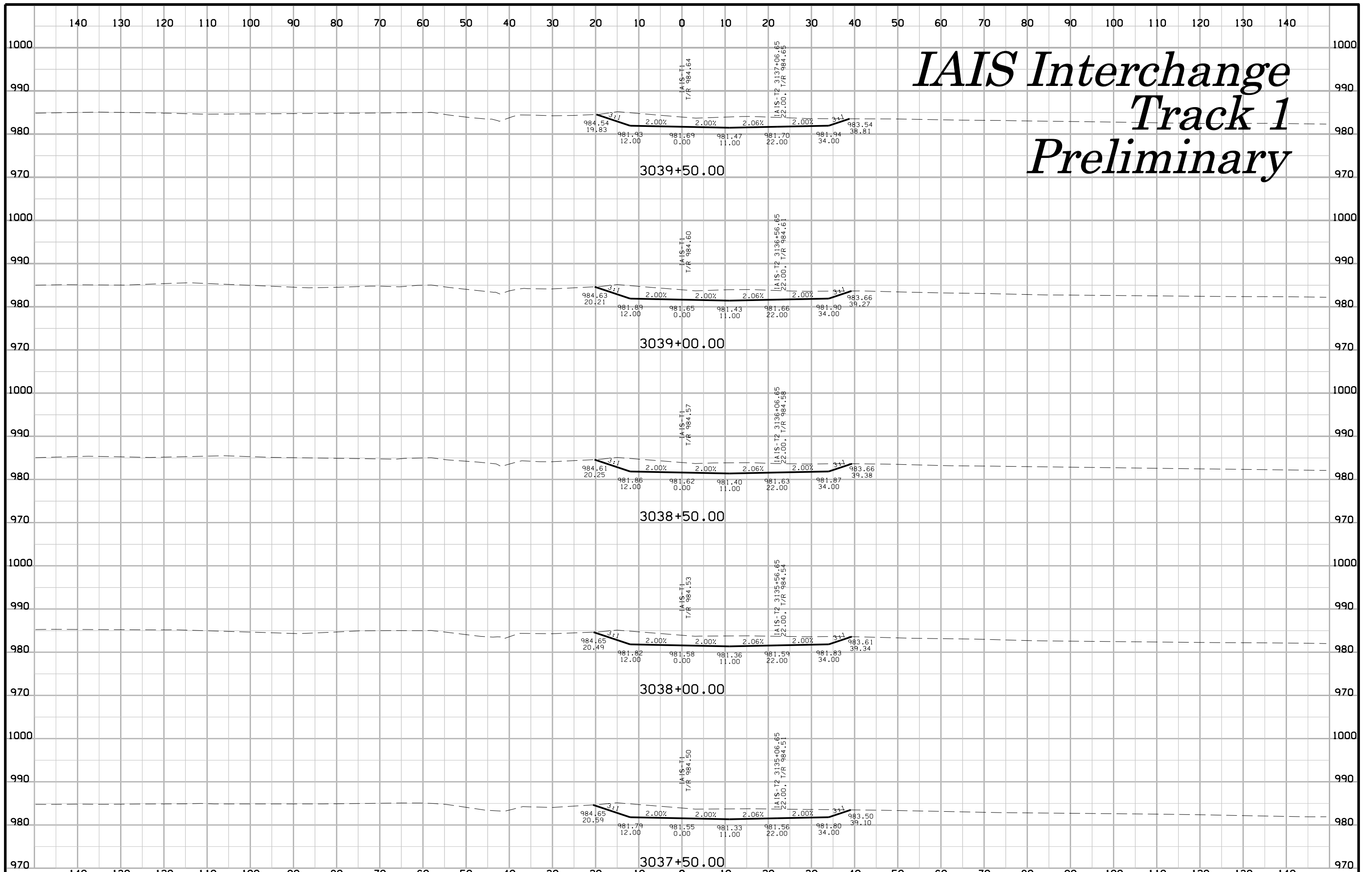
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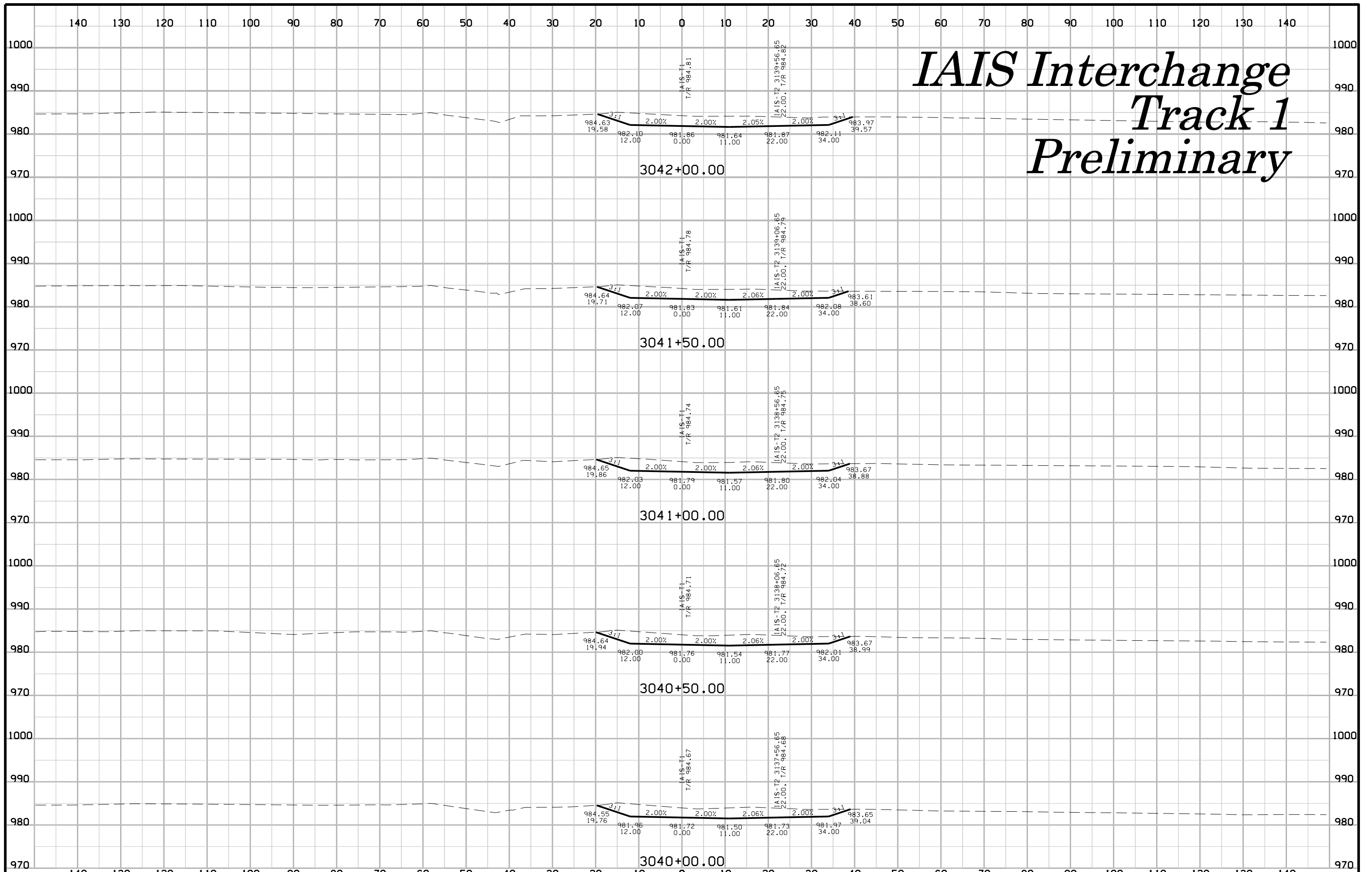
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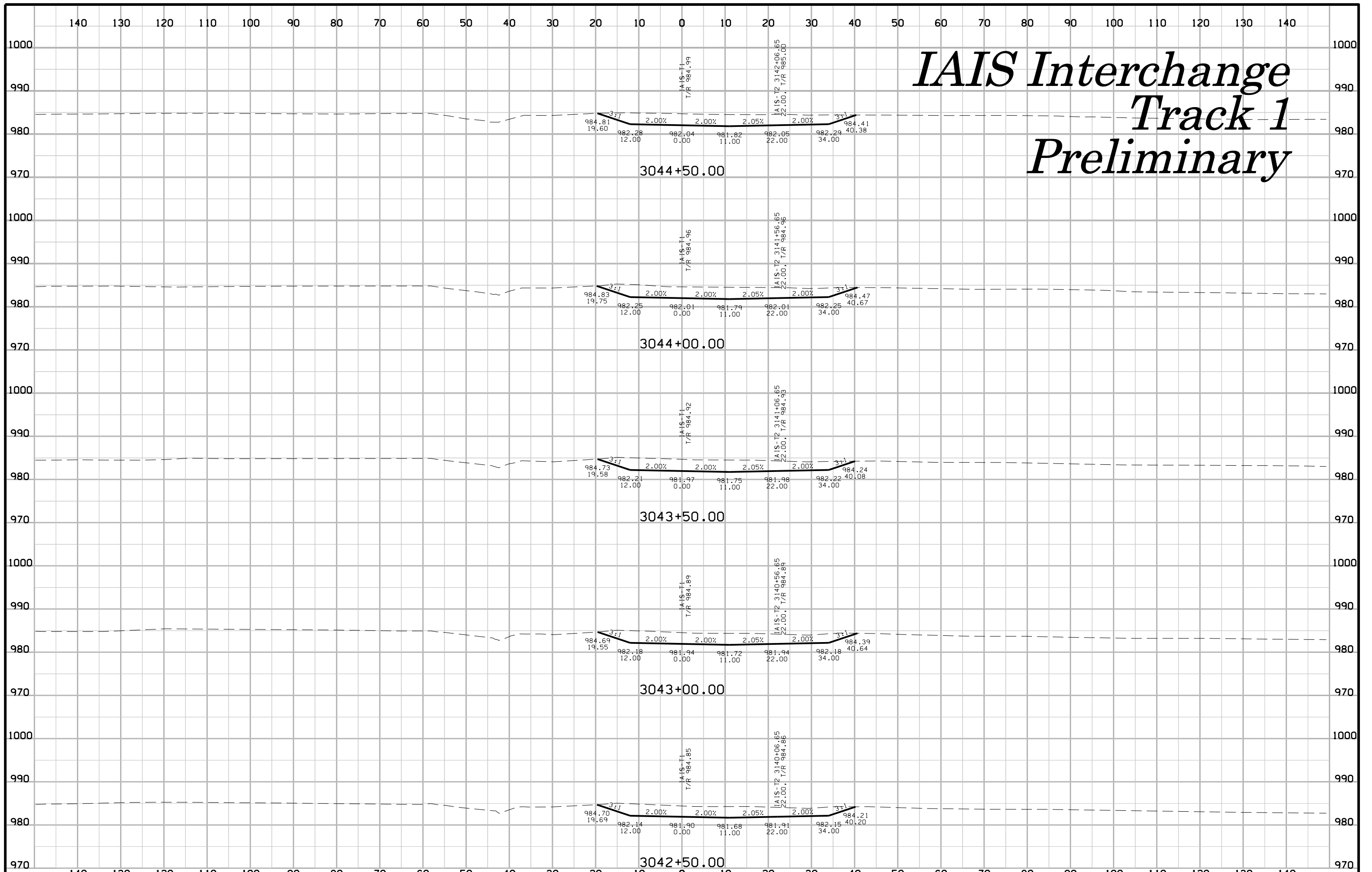
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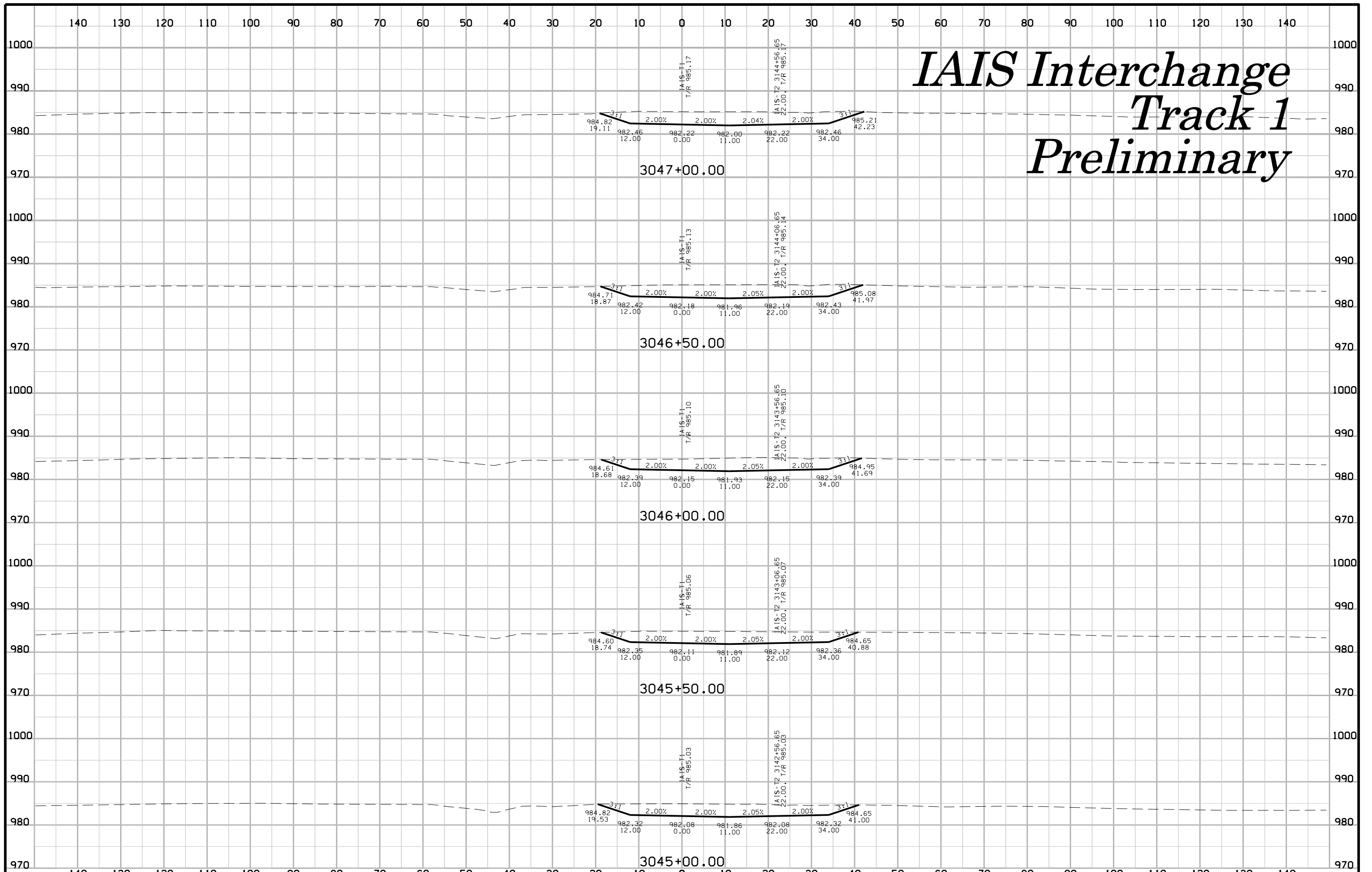
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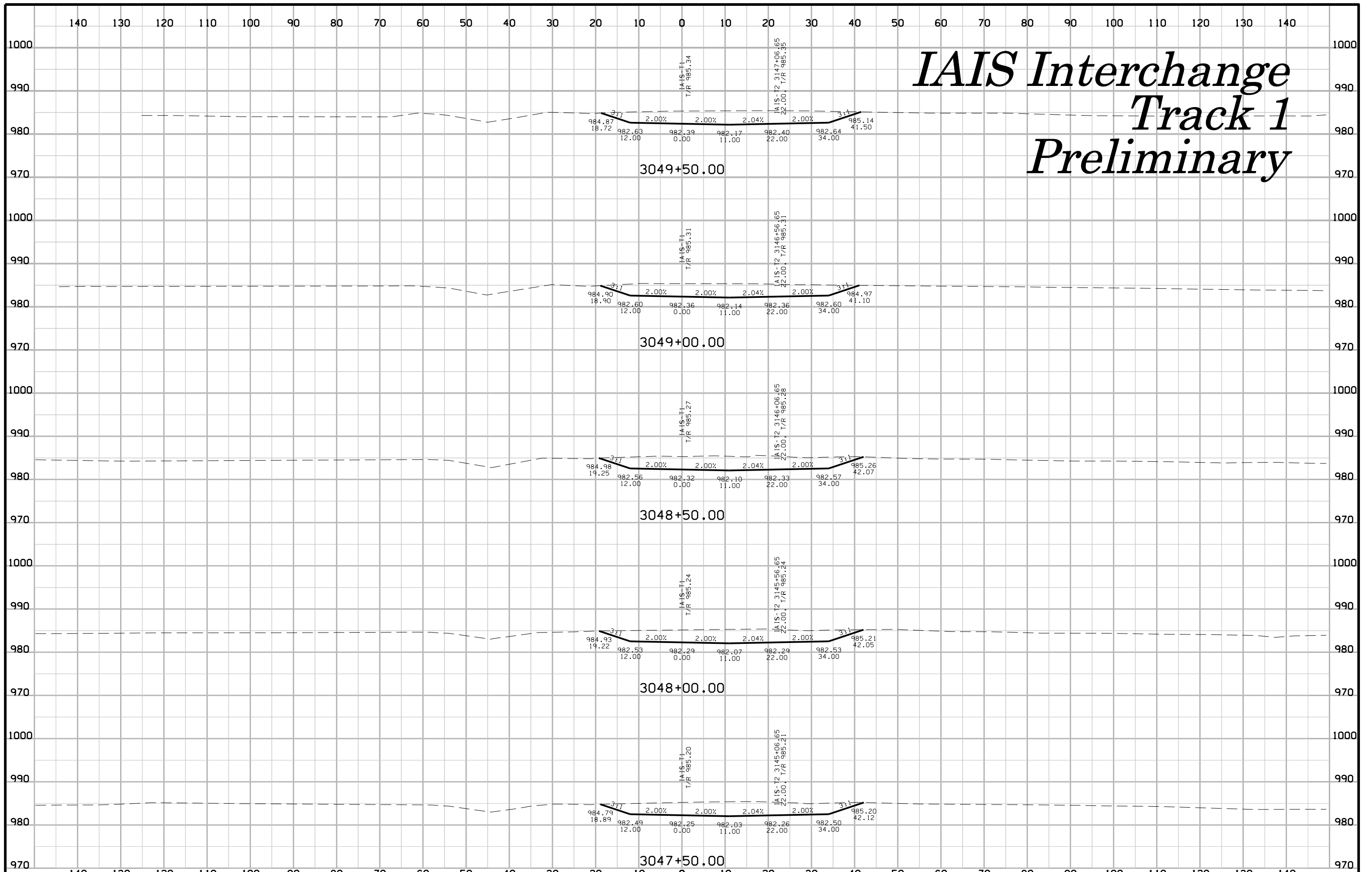
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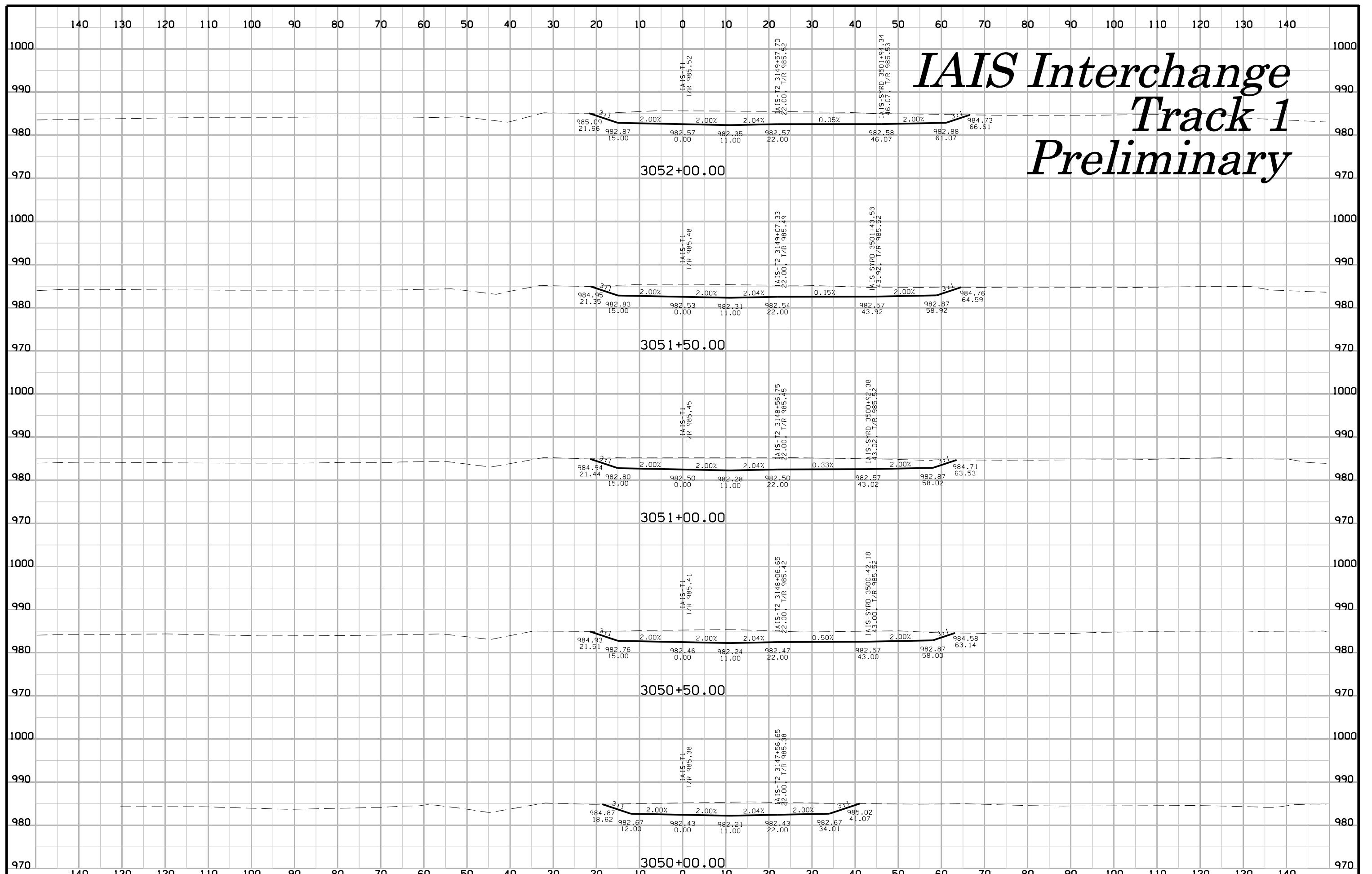
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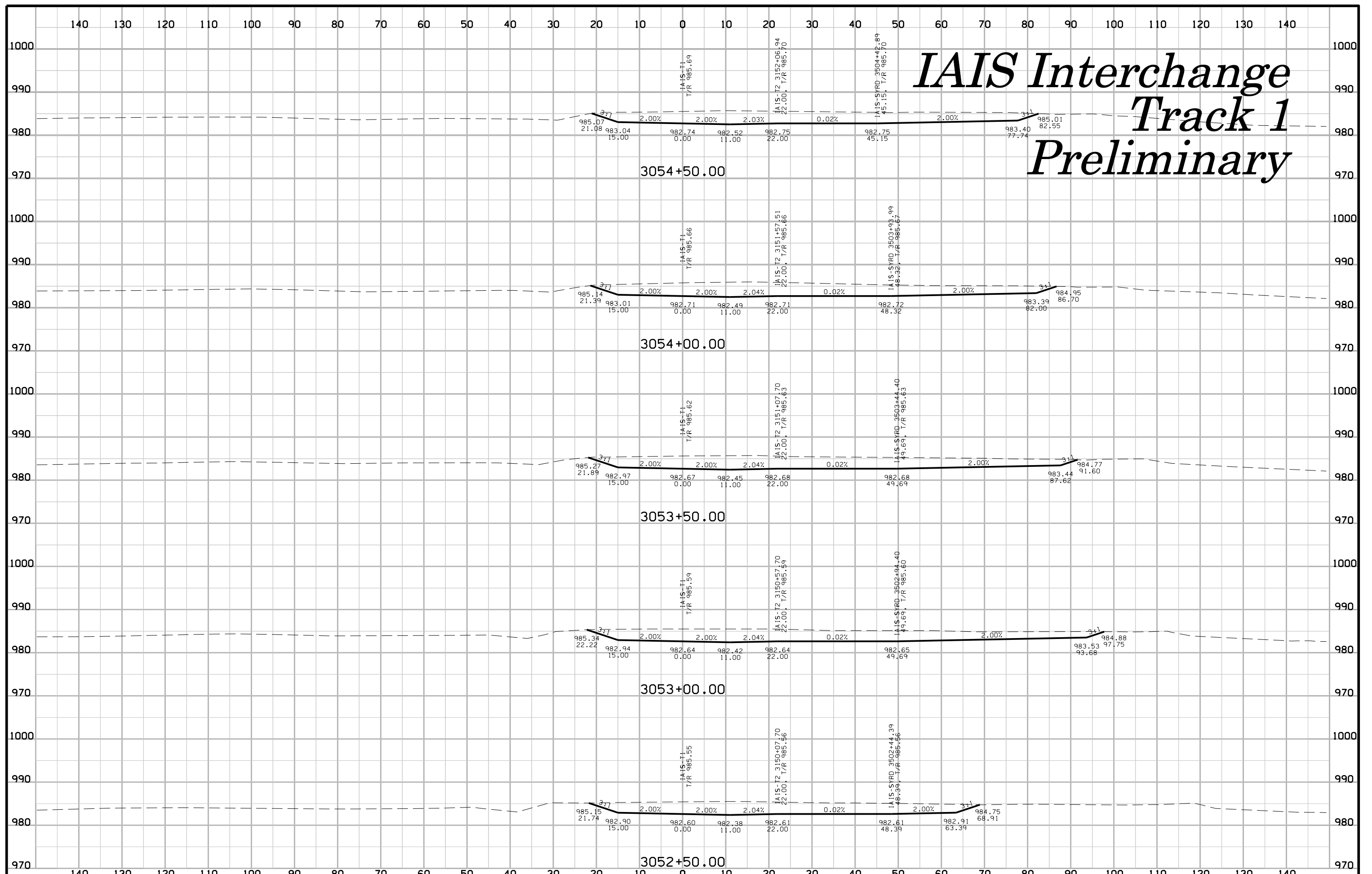
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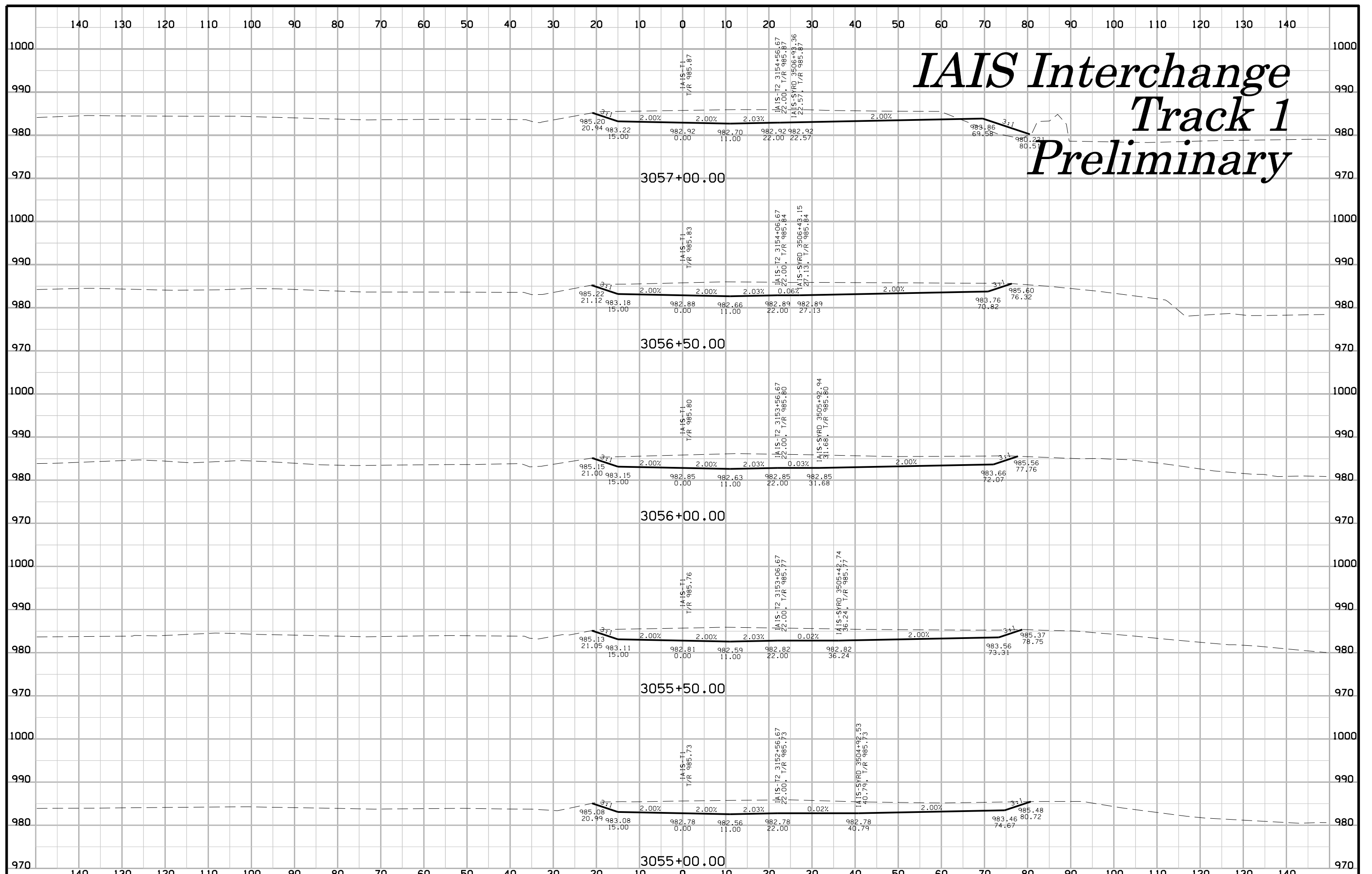
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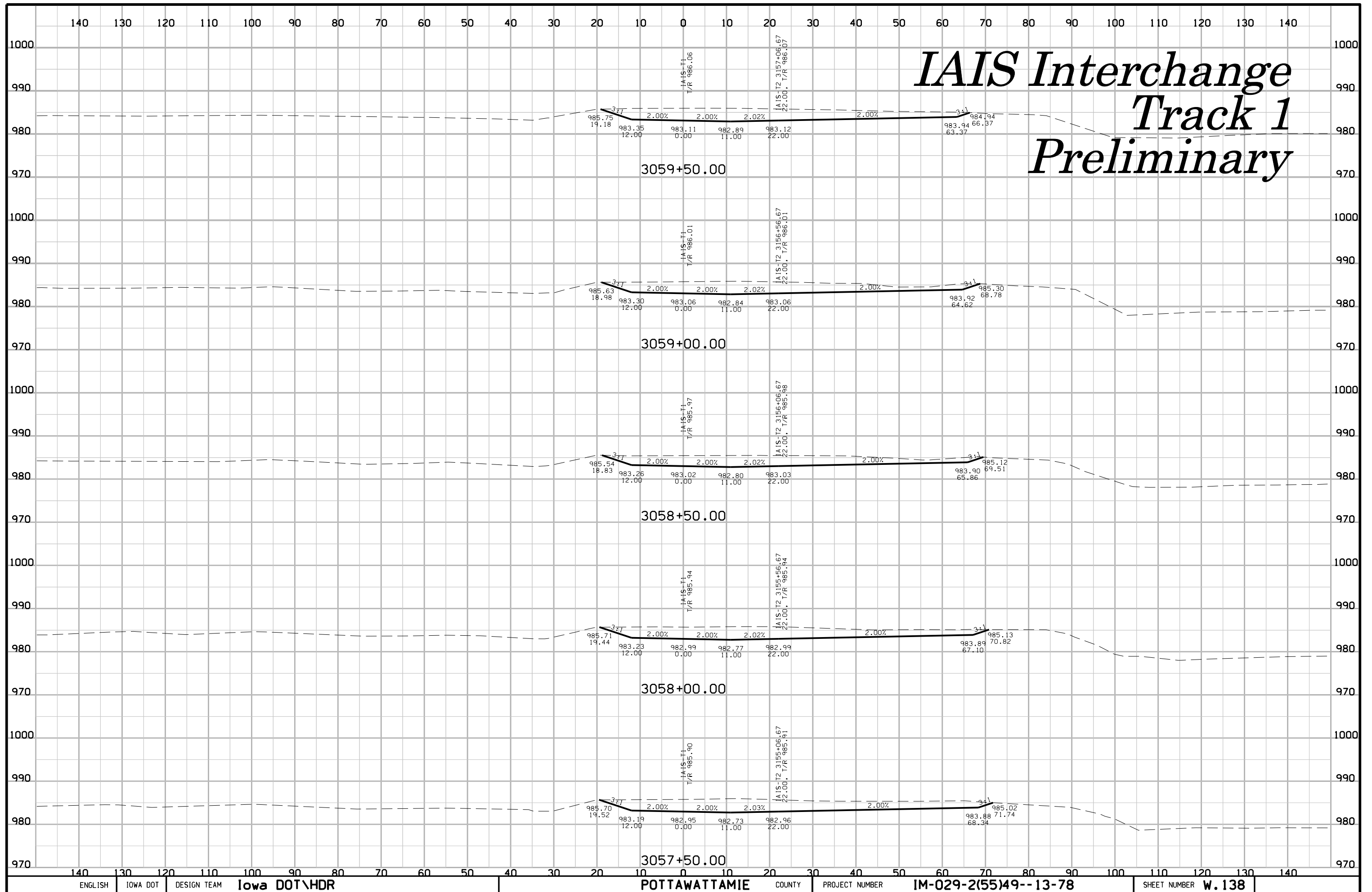


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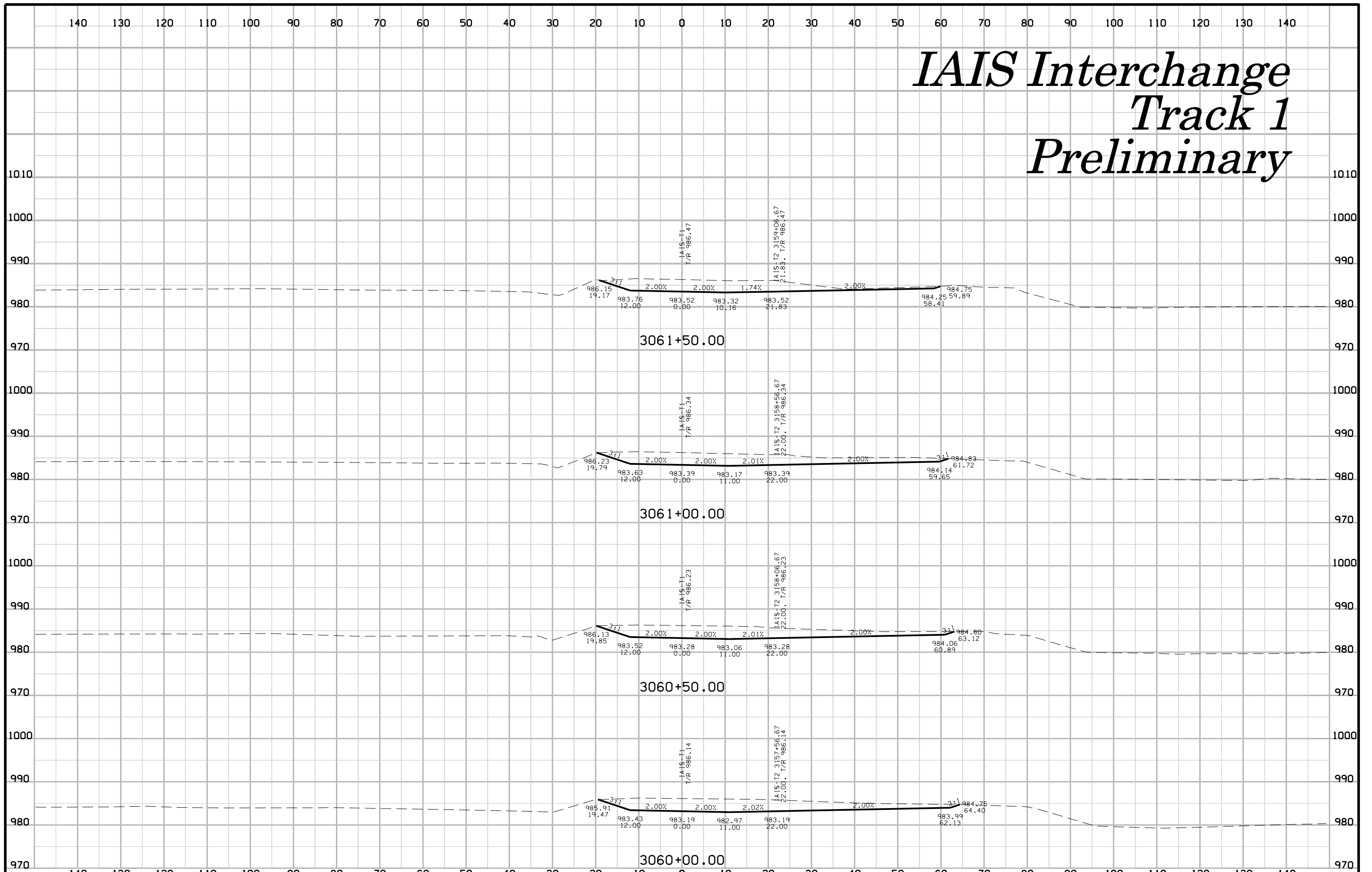


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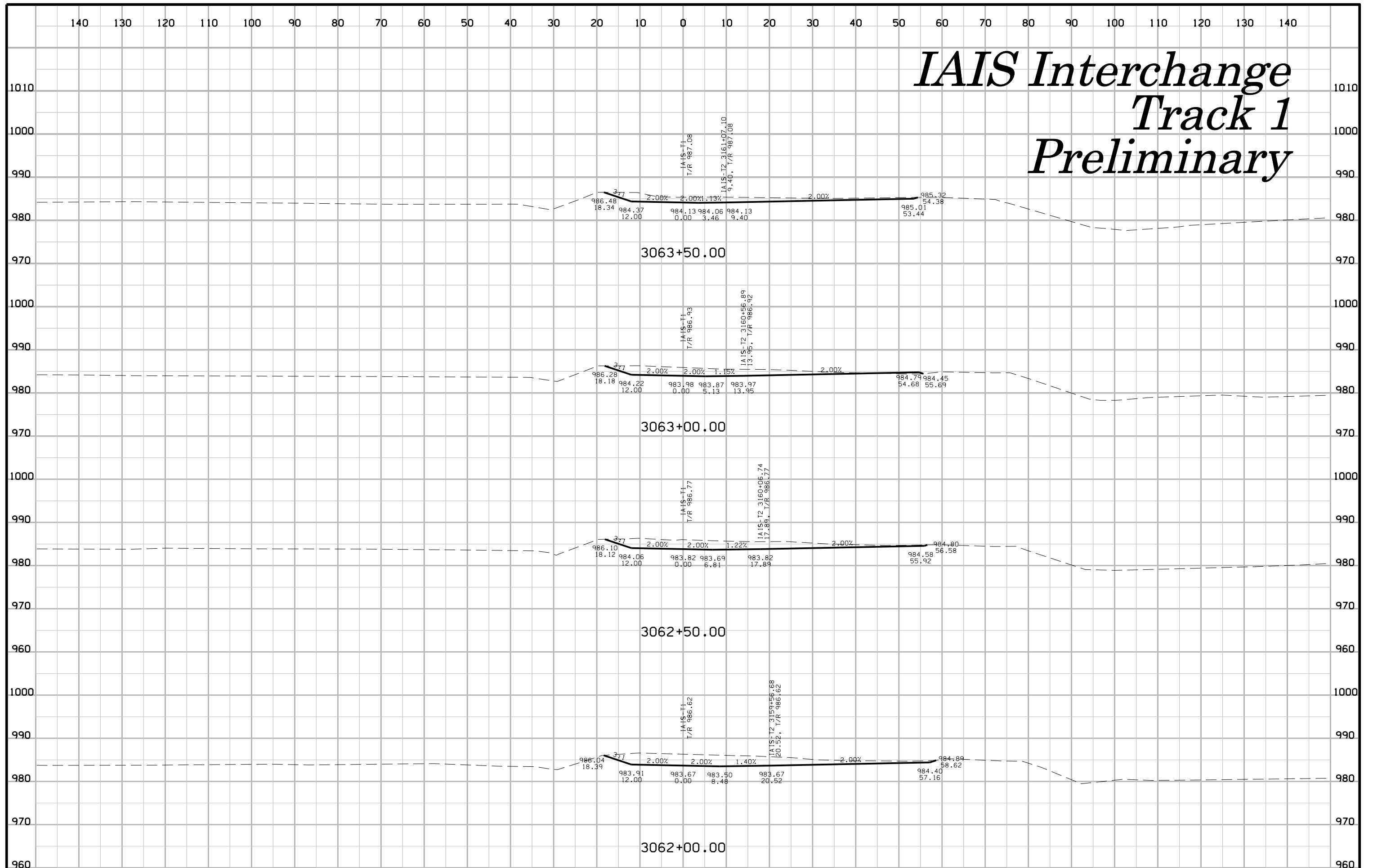




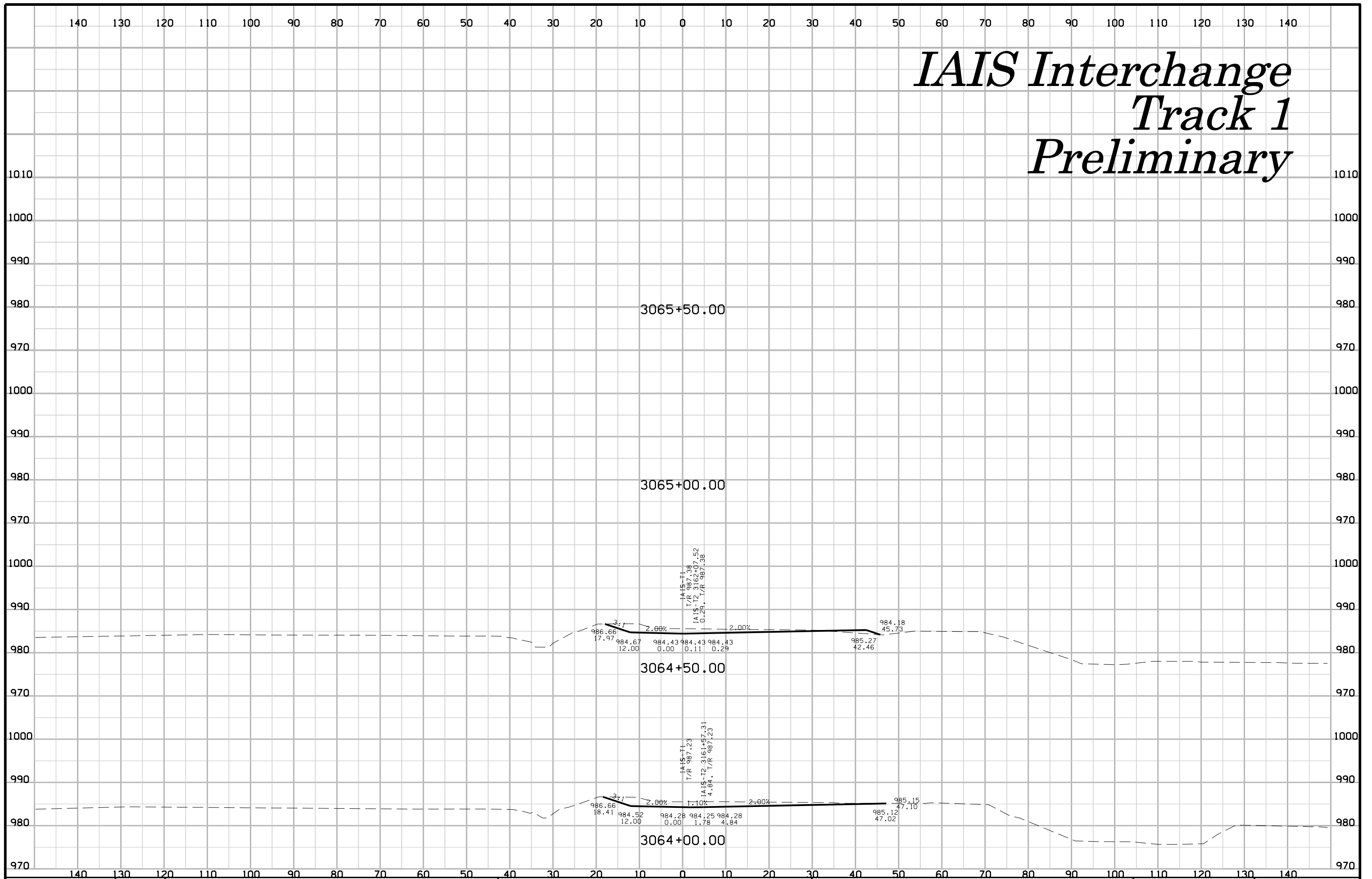
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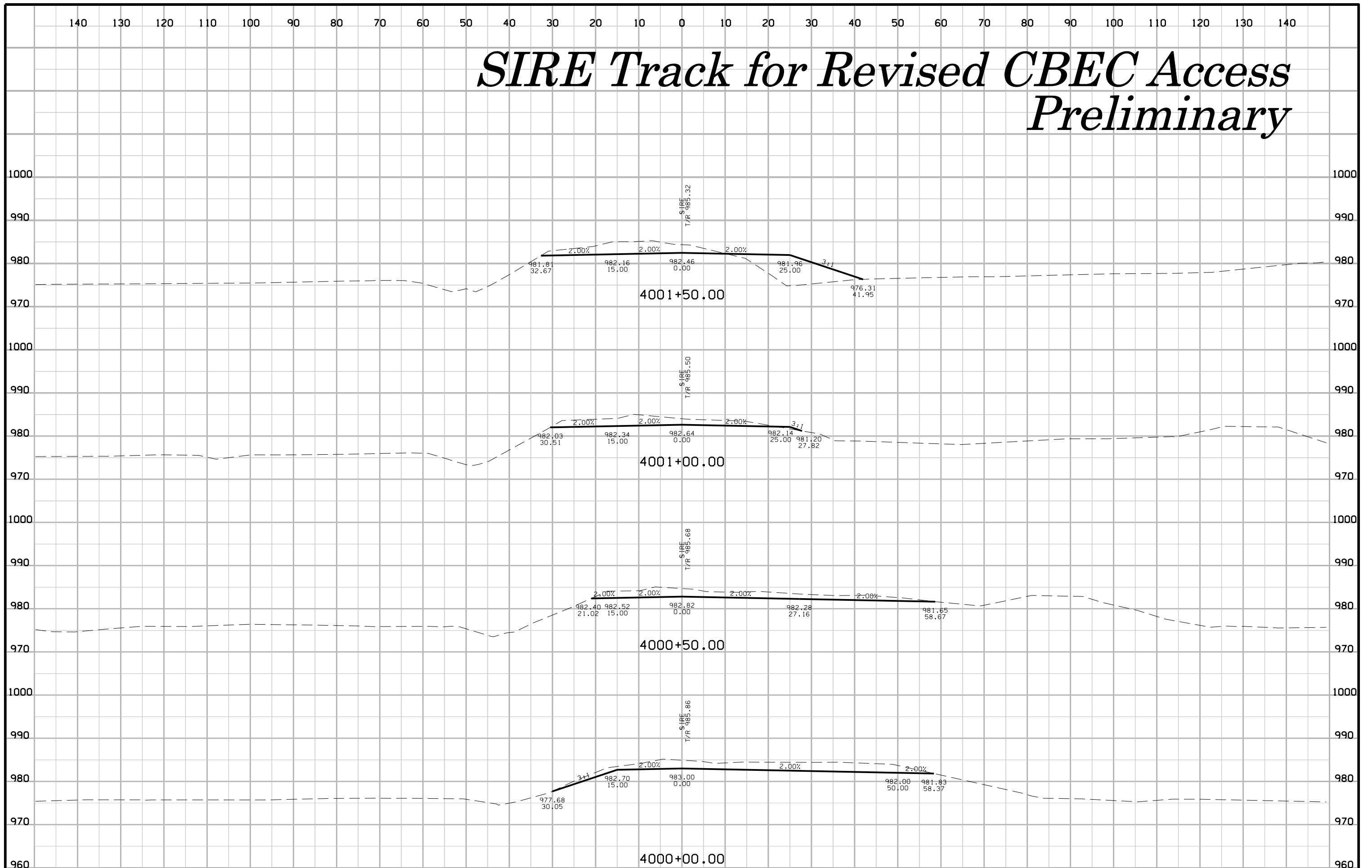
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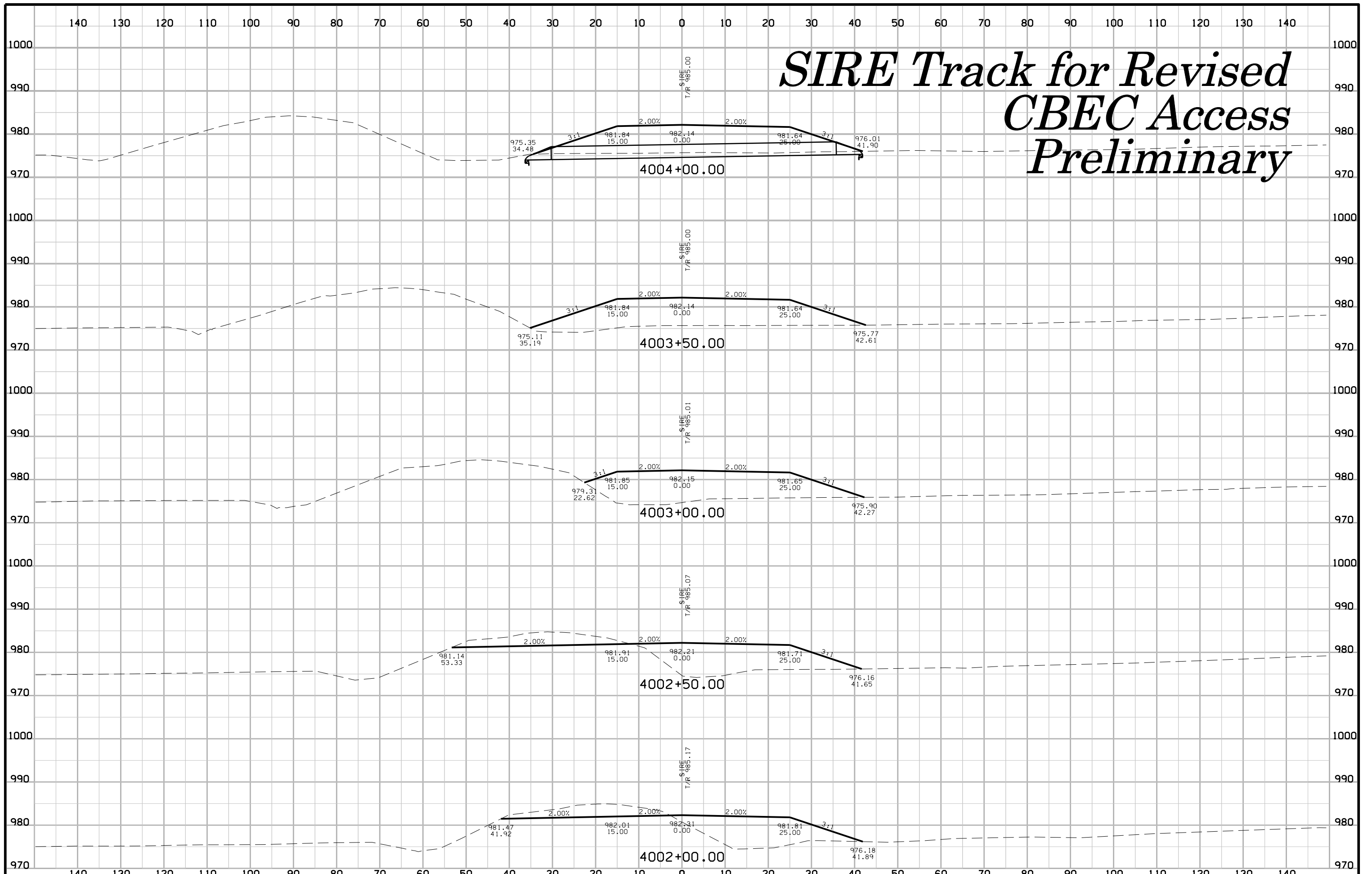
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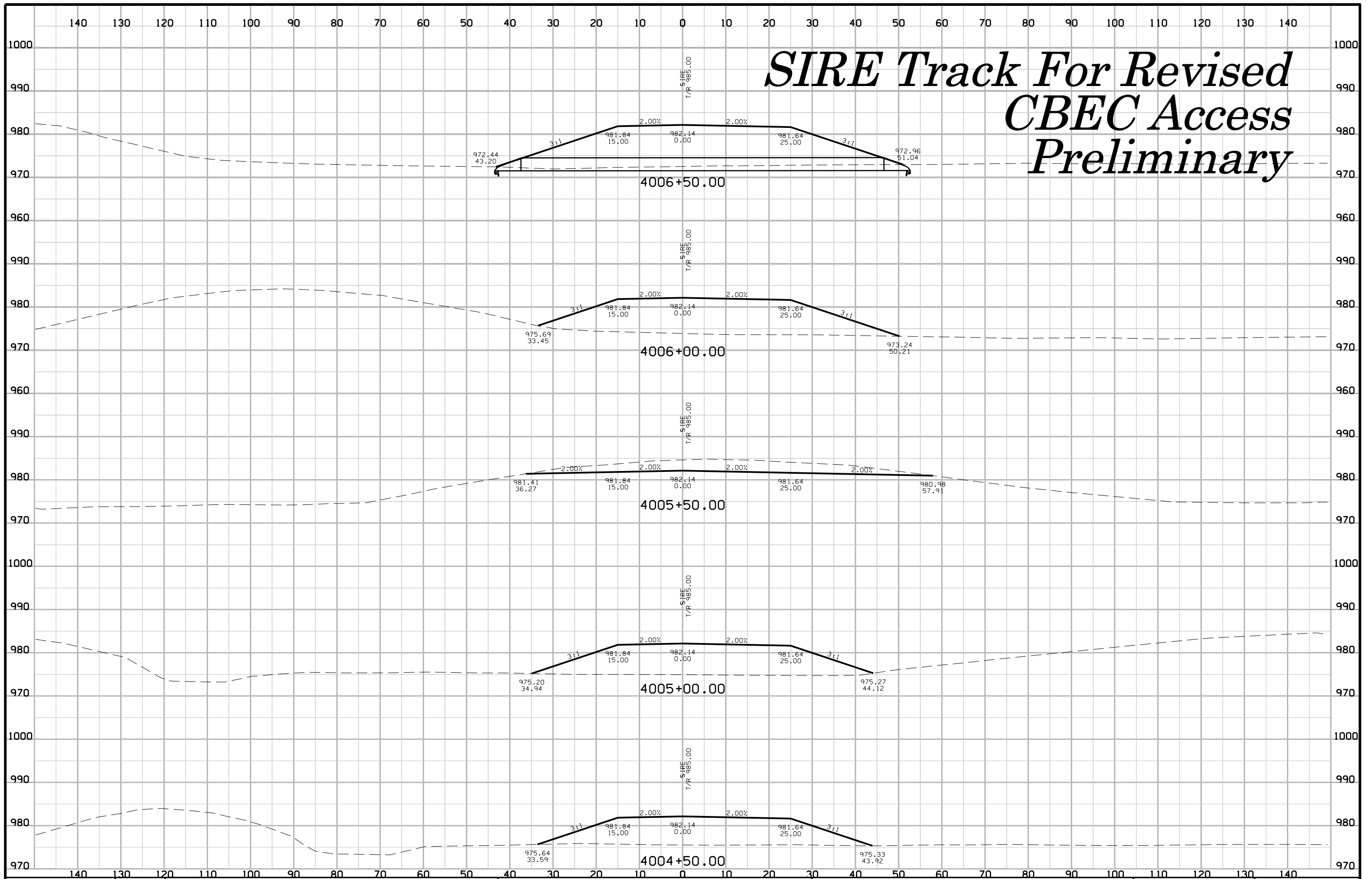
SIRE Track for Revised CBEC Access Preliminary



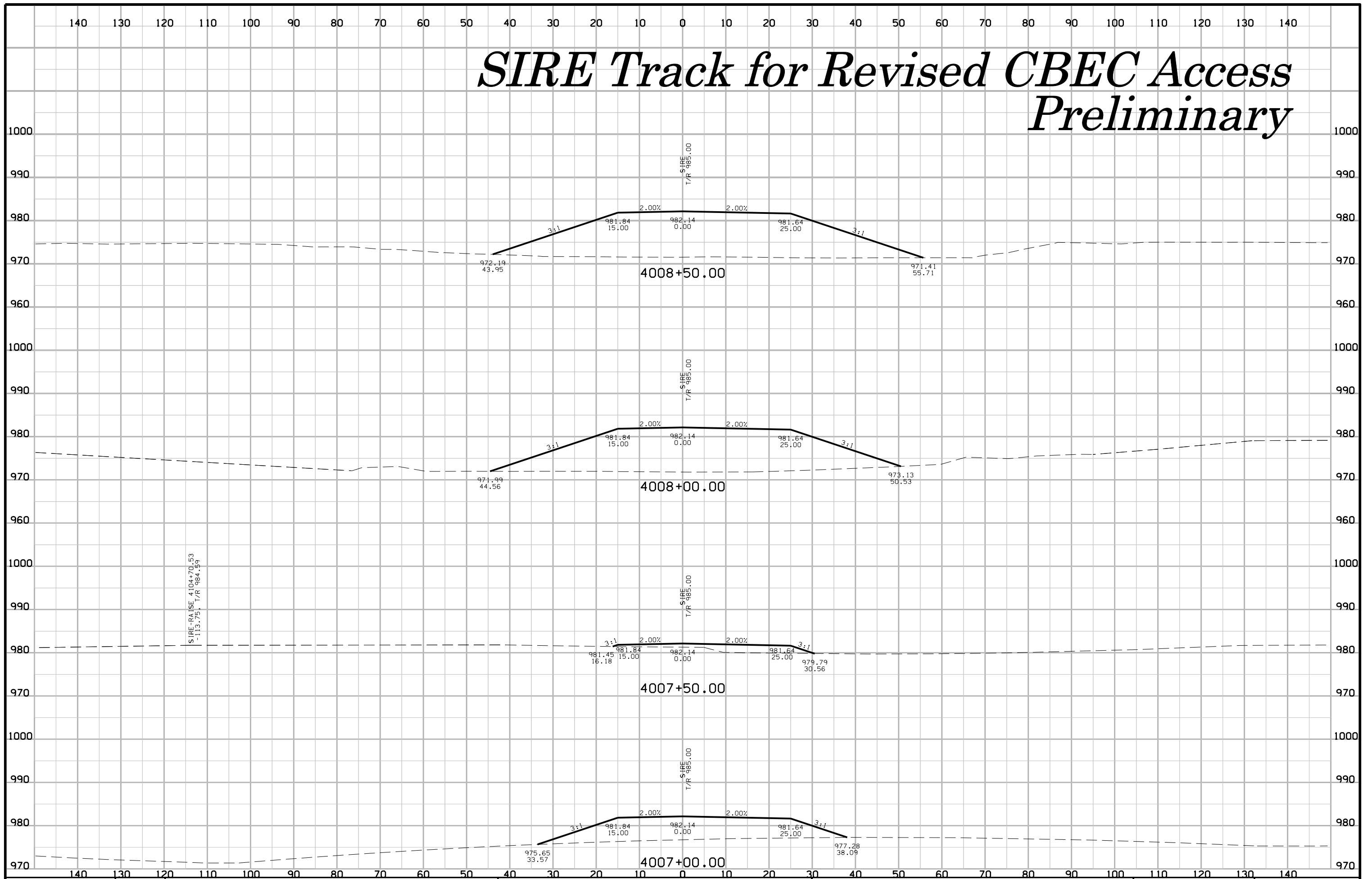
SIRE Track for Revised CBEC Access Preliminary



SIRE Track For Revised CBEC Access Preliminary

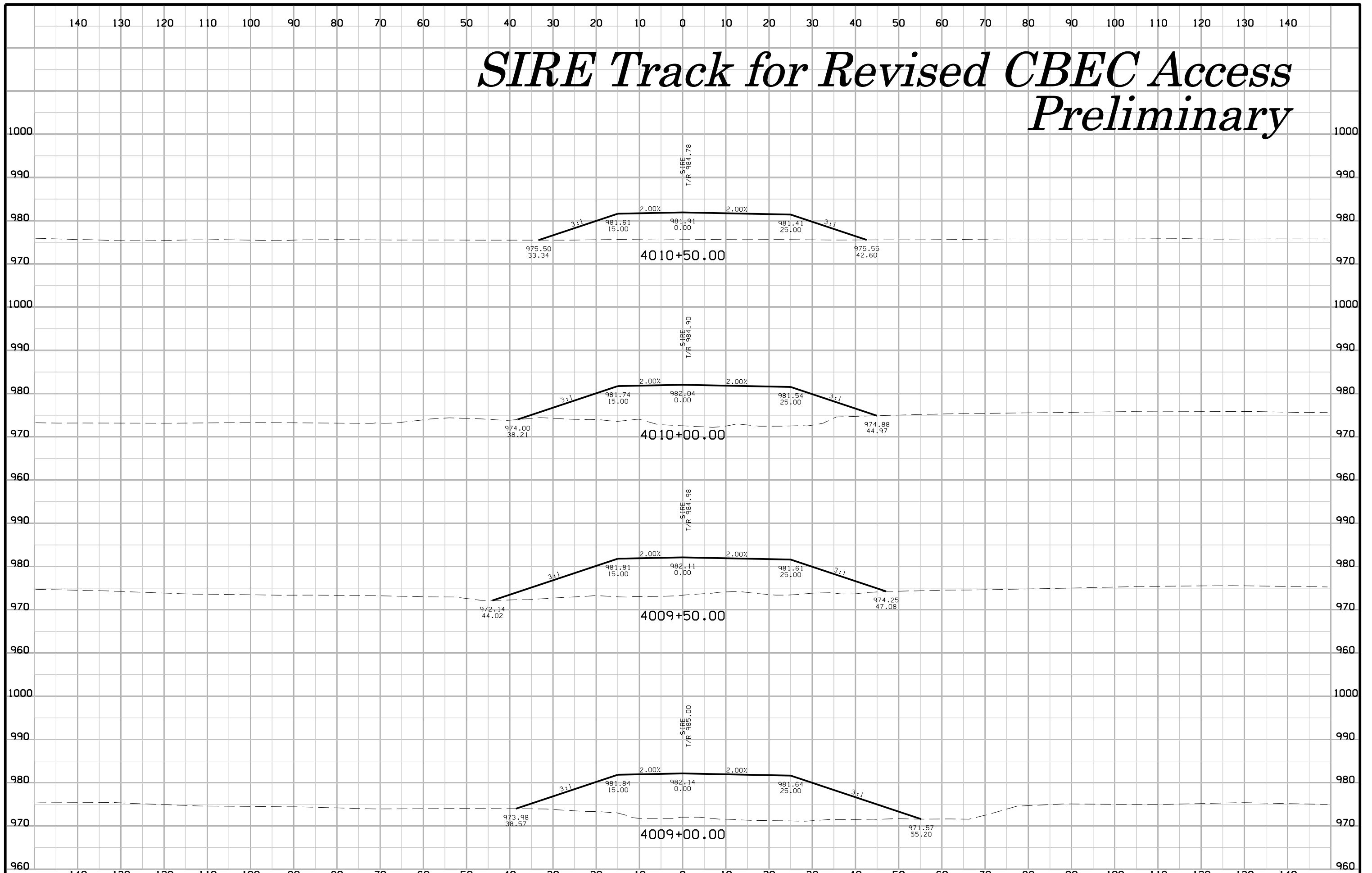


SIRE Track for Revised CBEC Access Preliminary

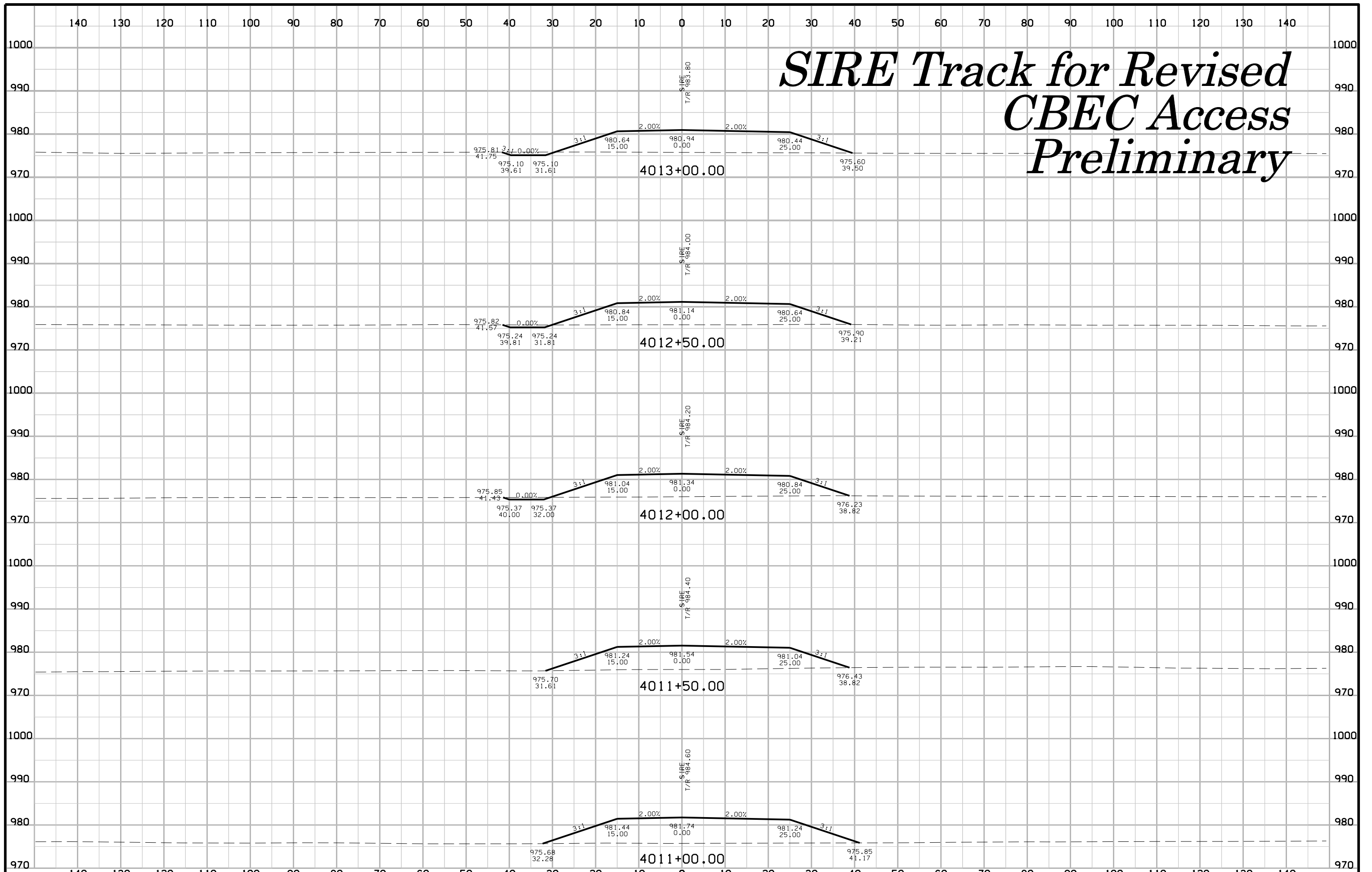


SIRE RAISE 4104+70.53
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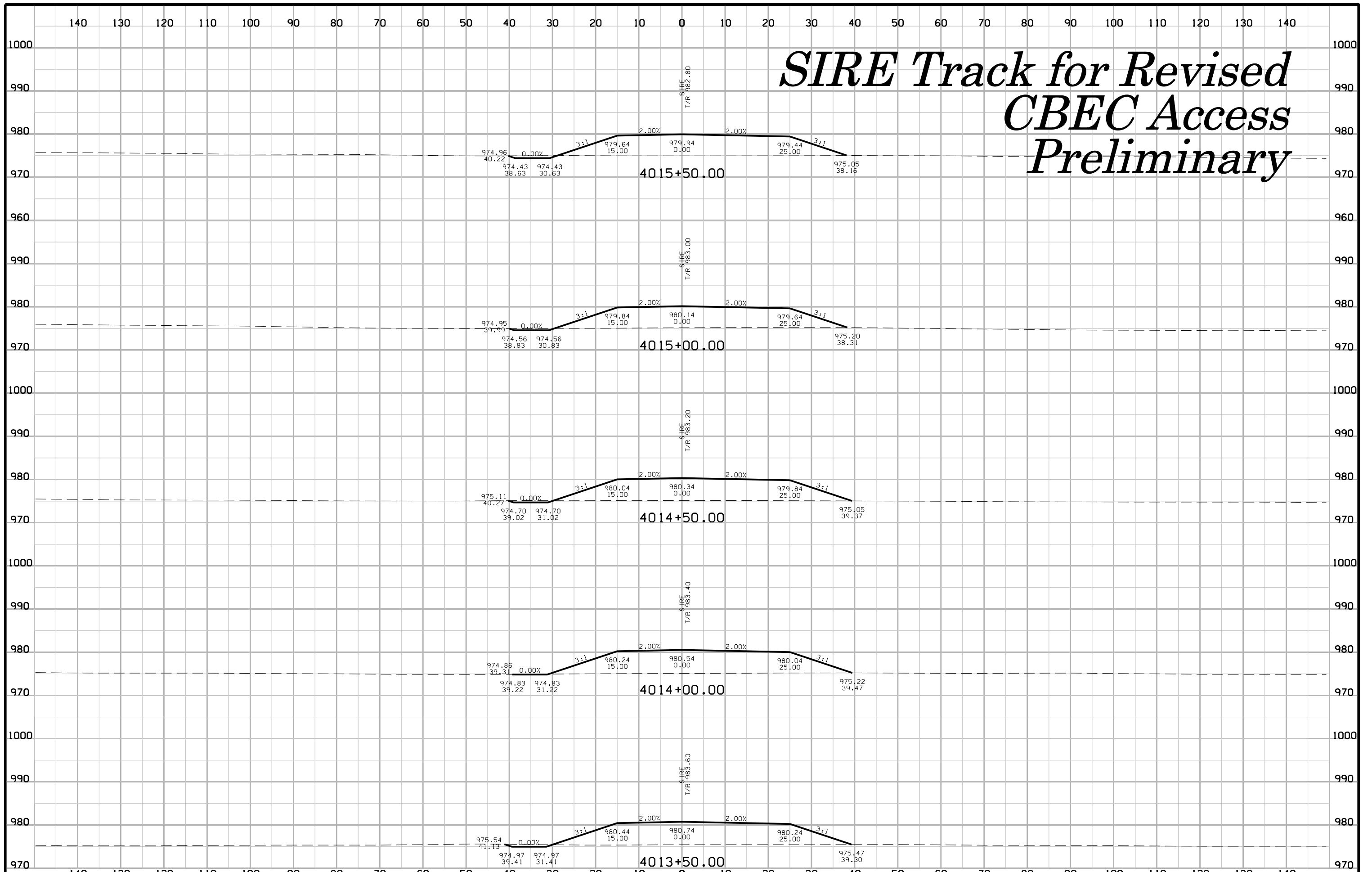
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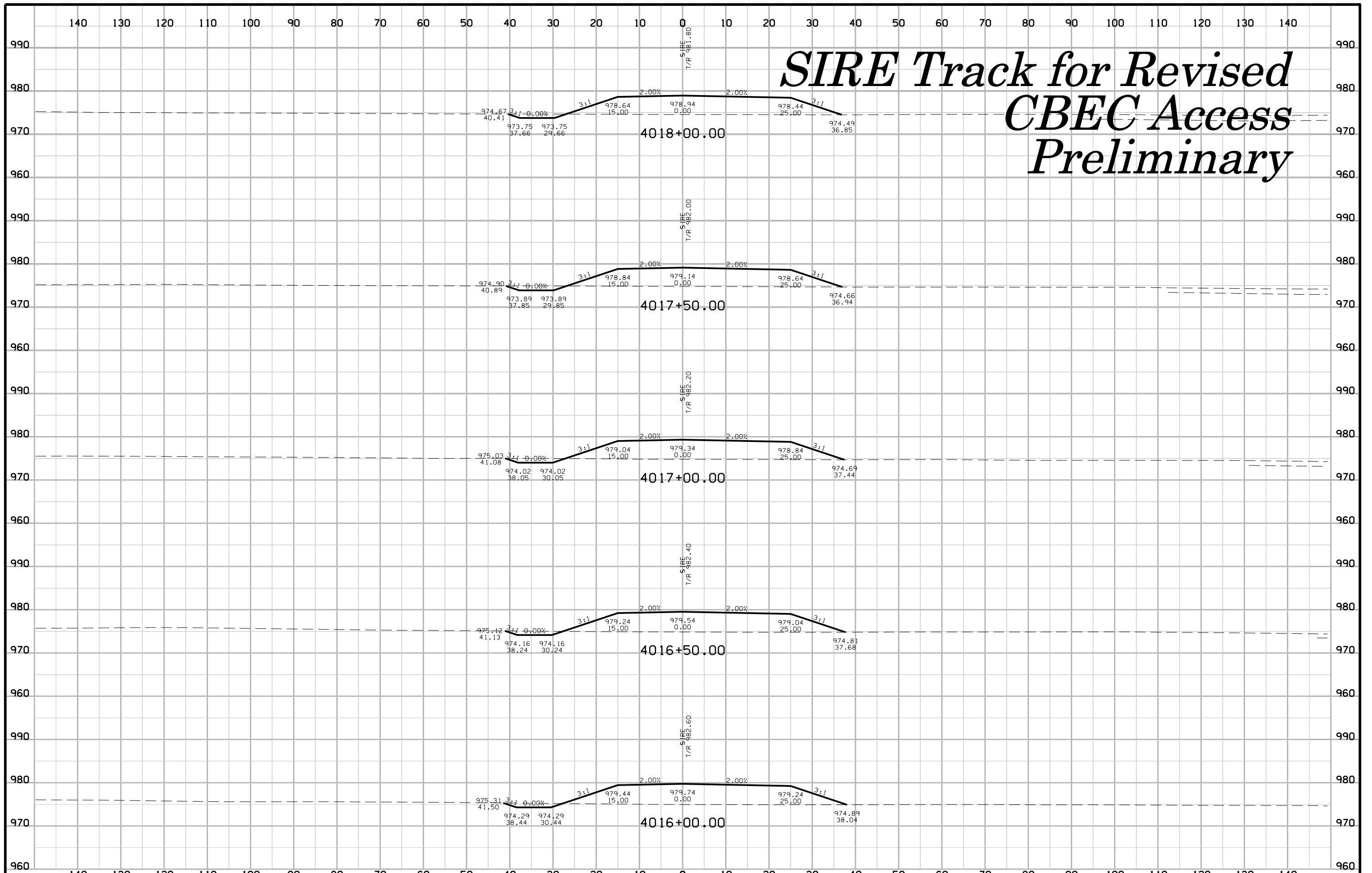
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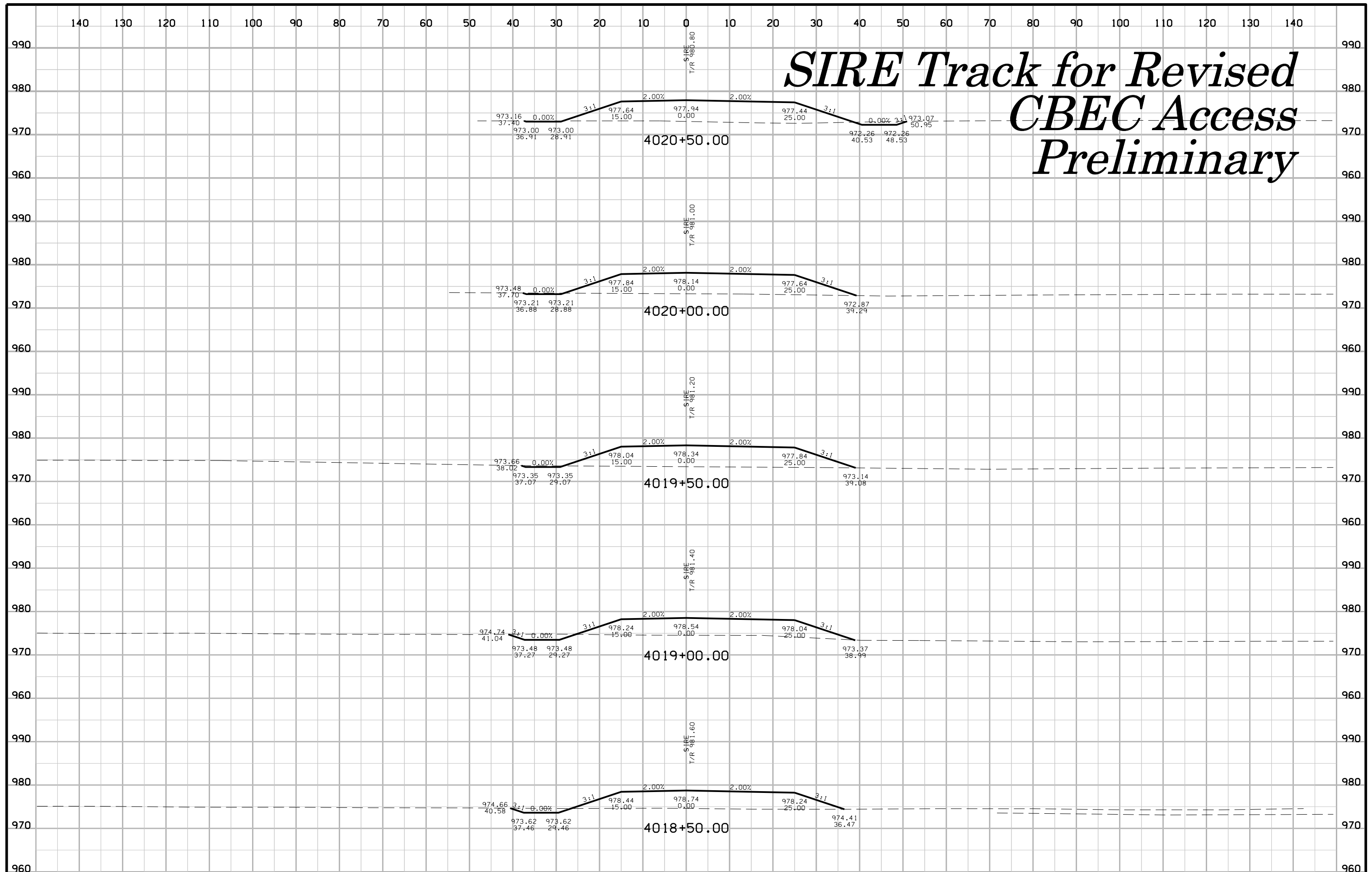
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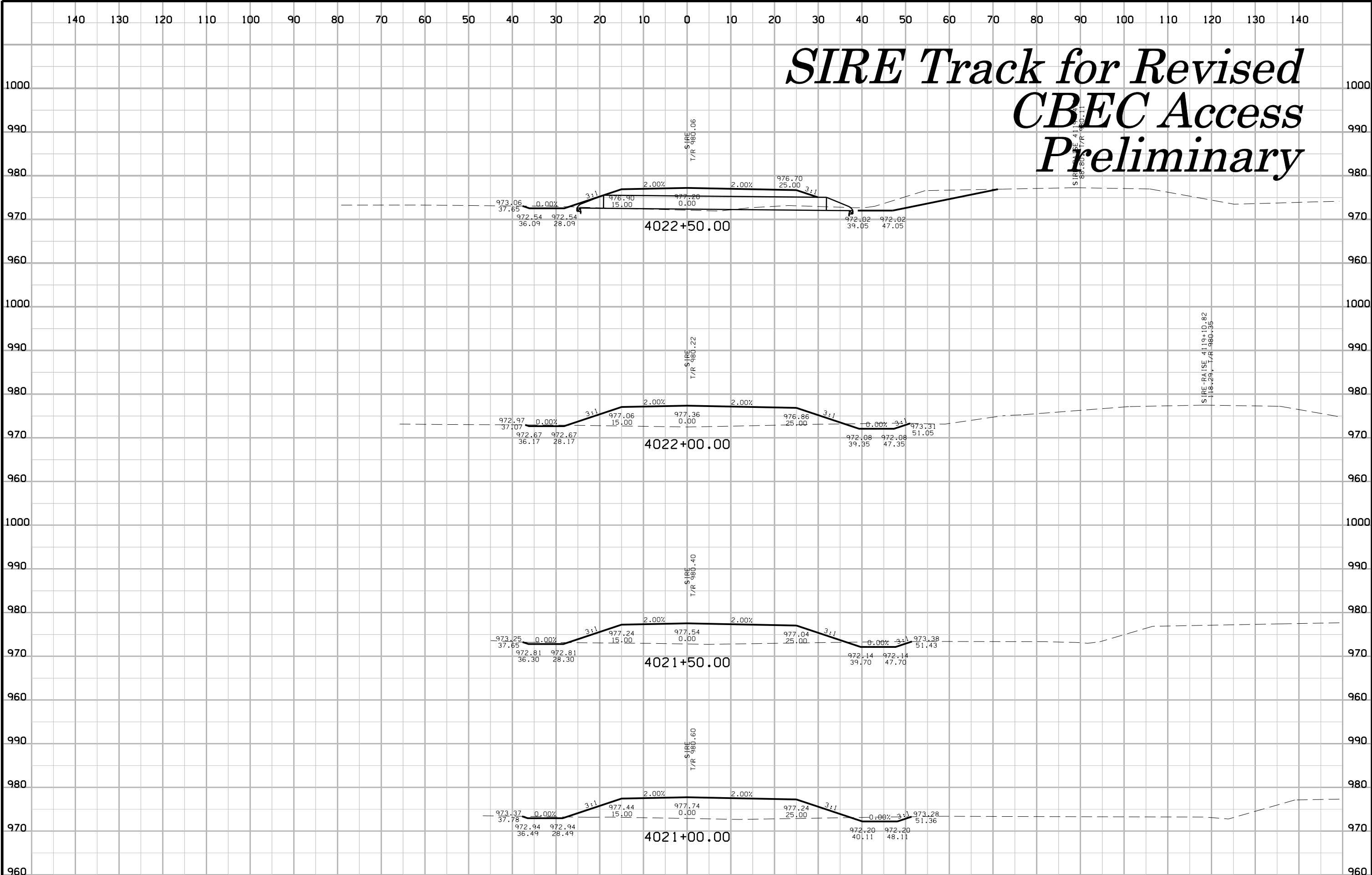
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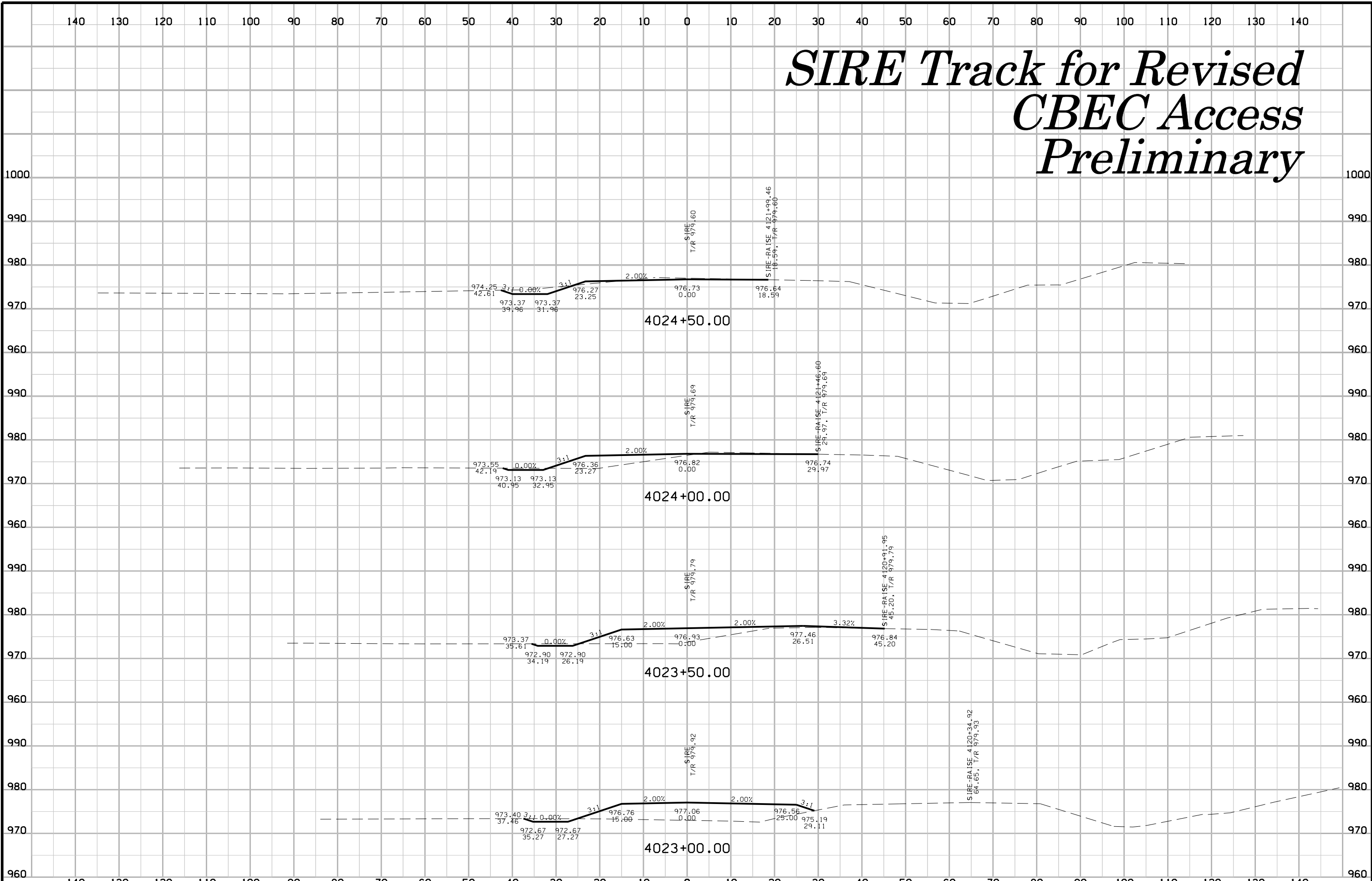
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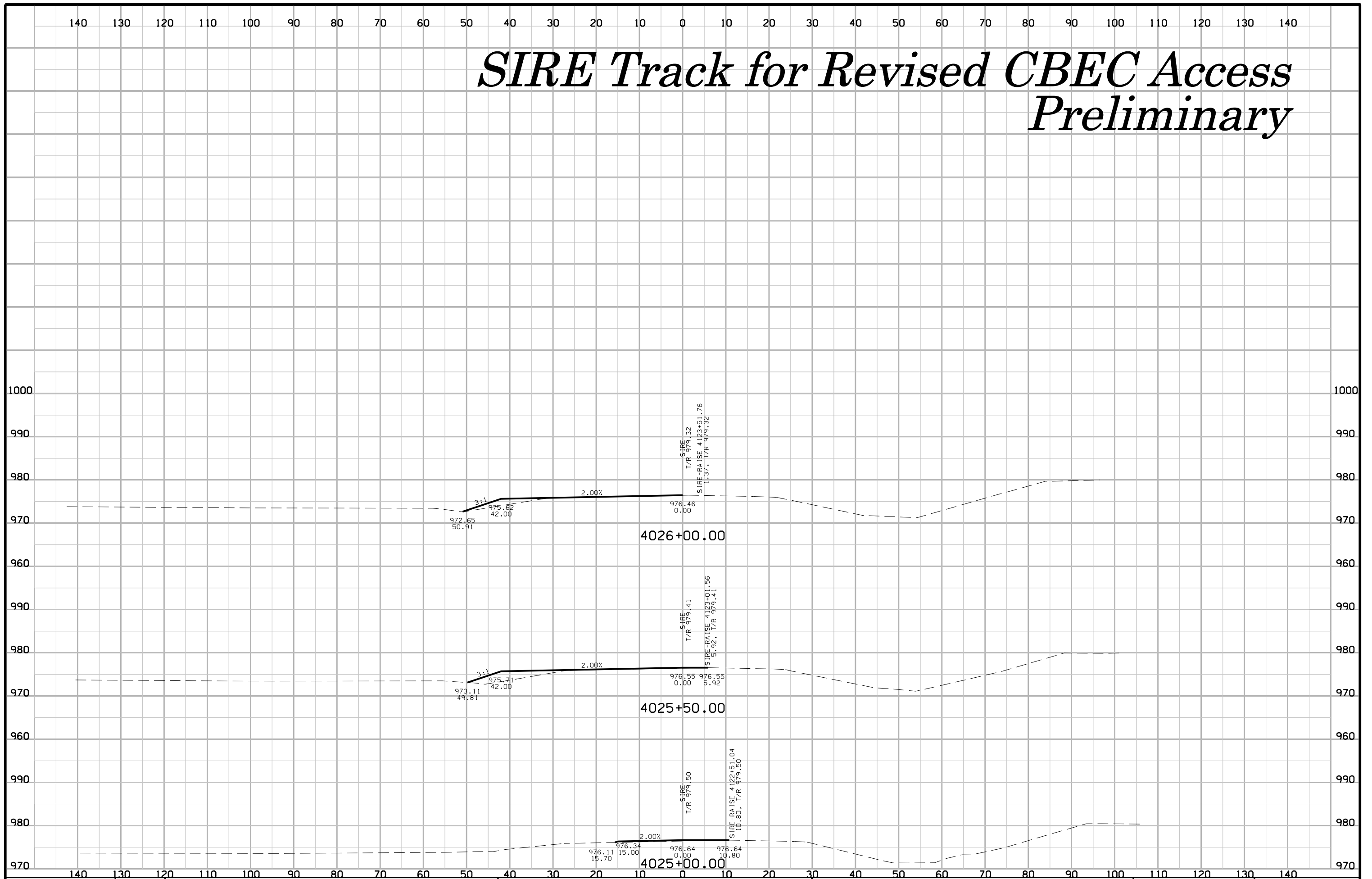
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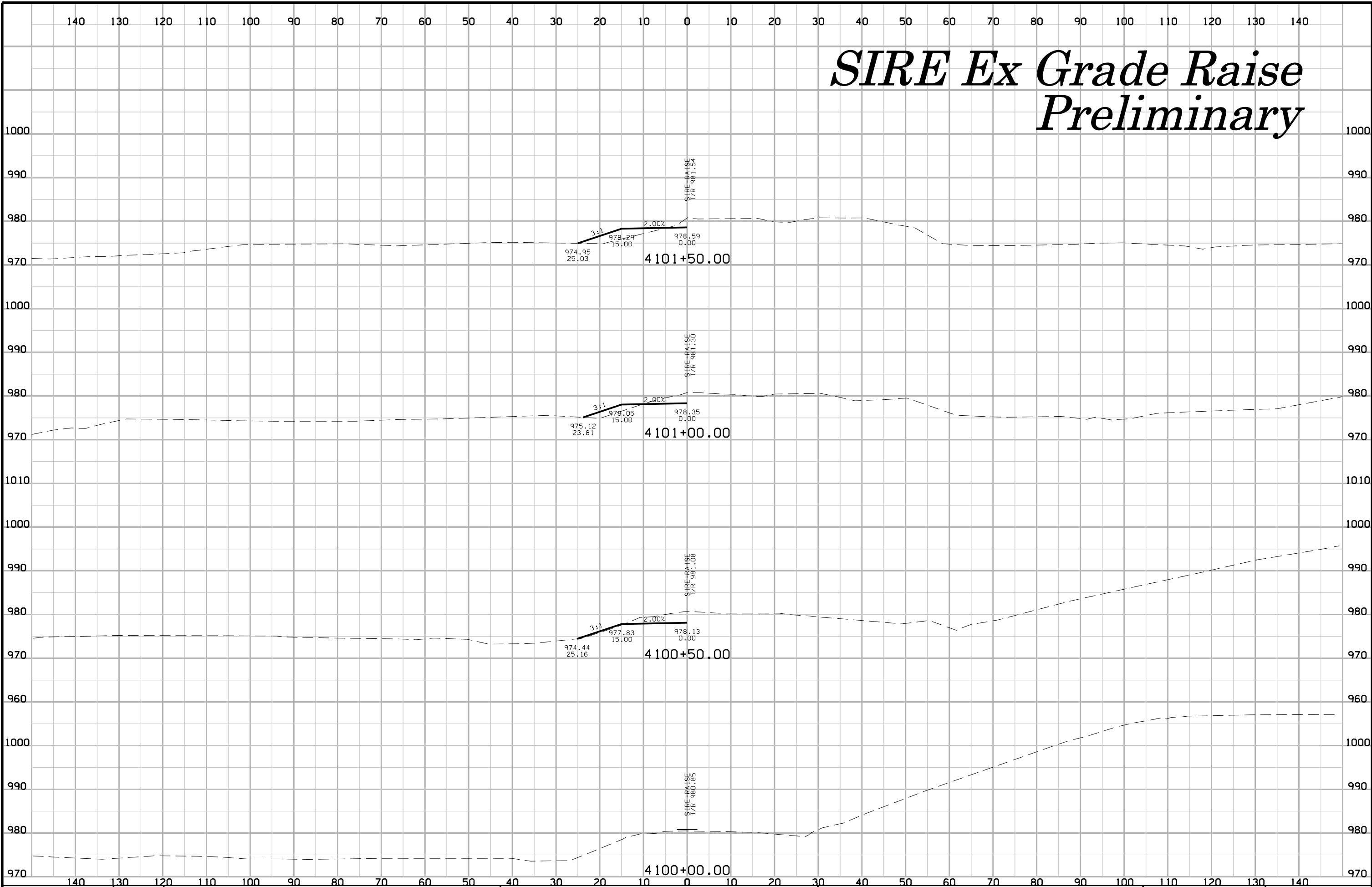
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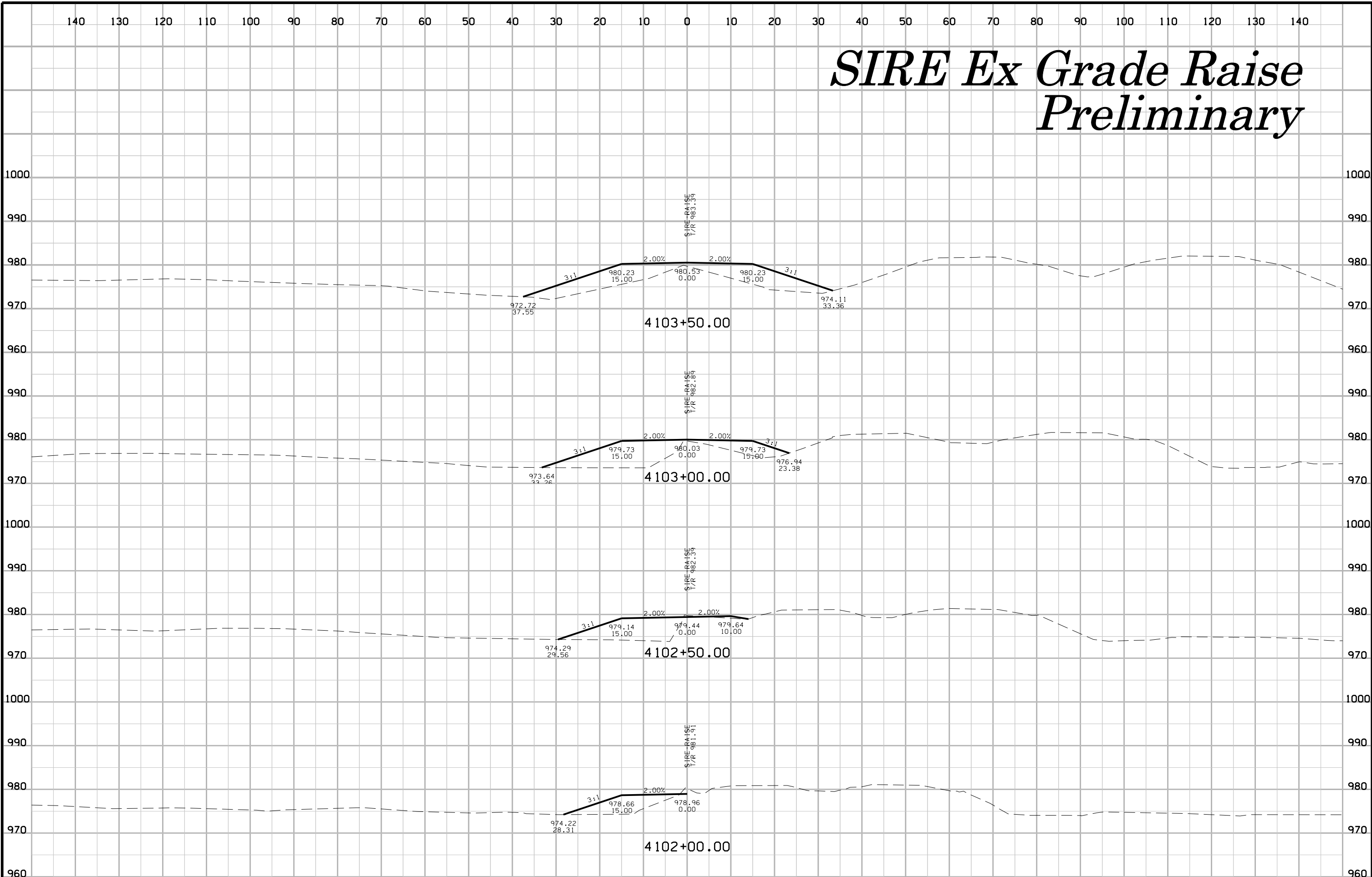
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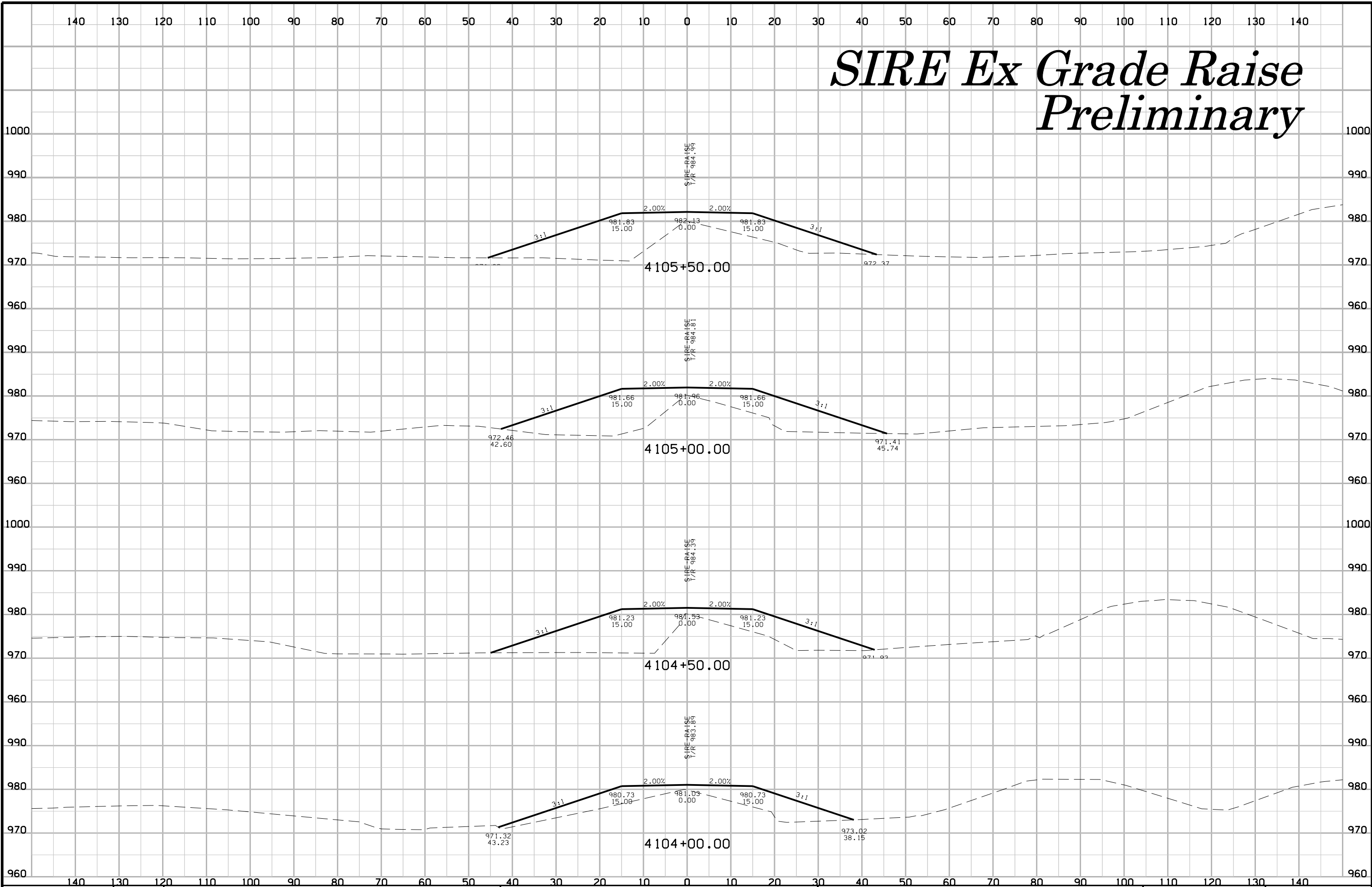
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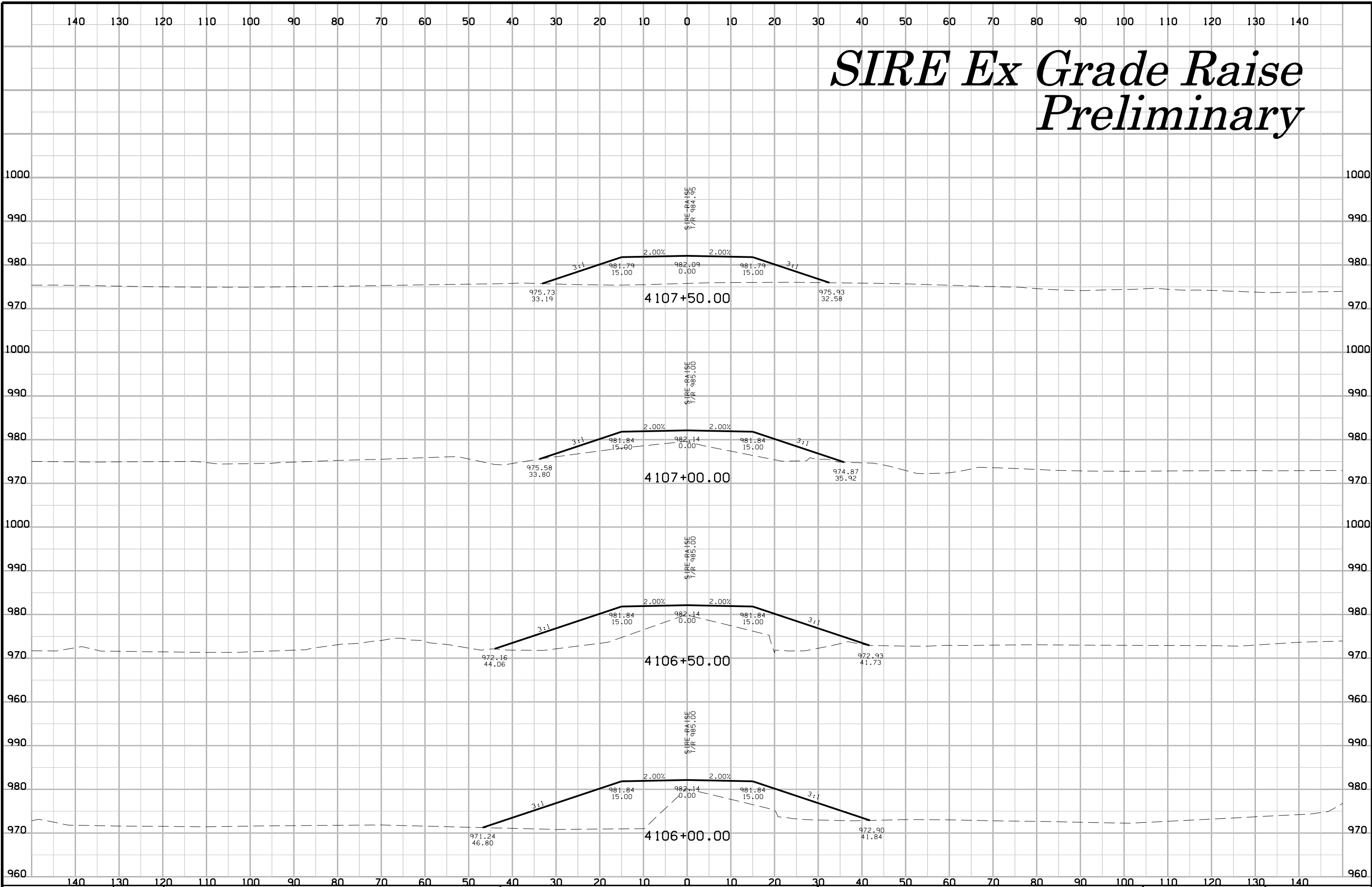
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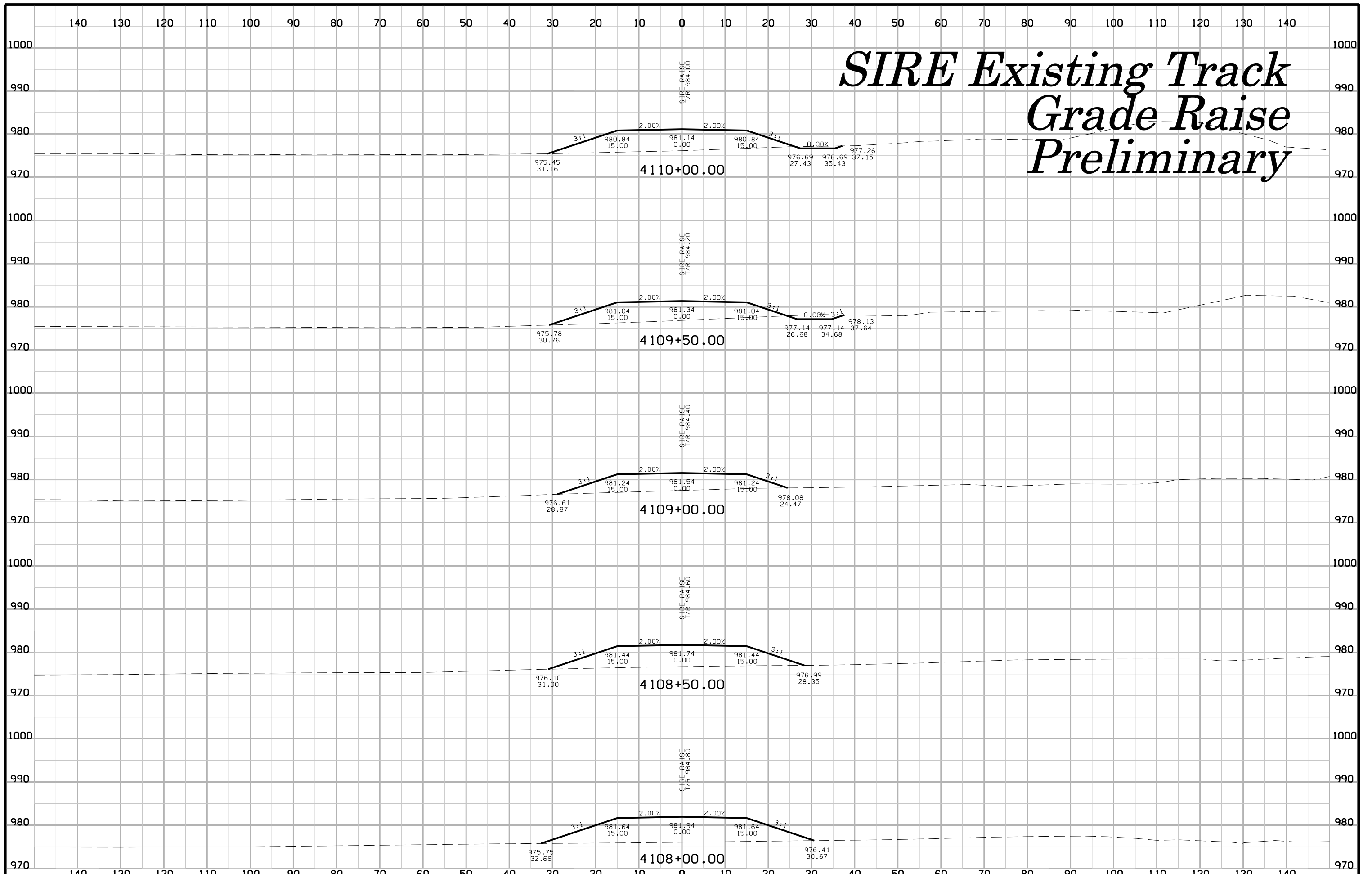
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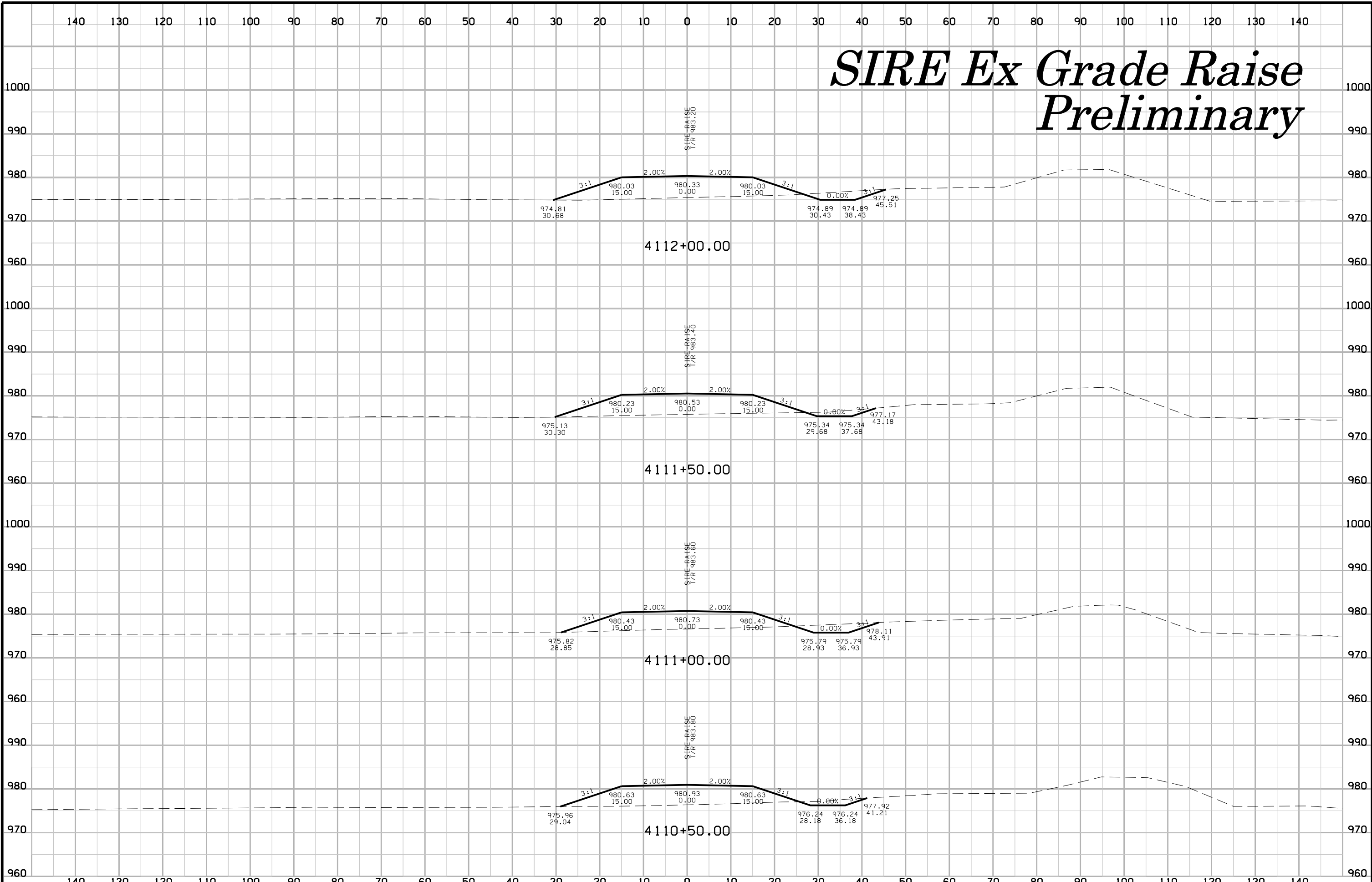
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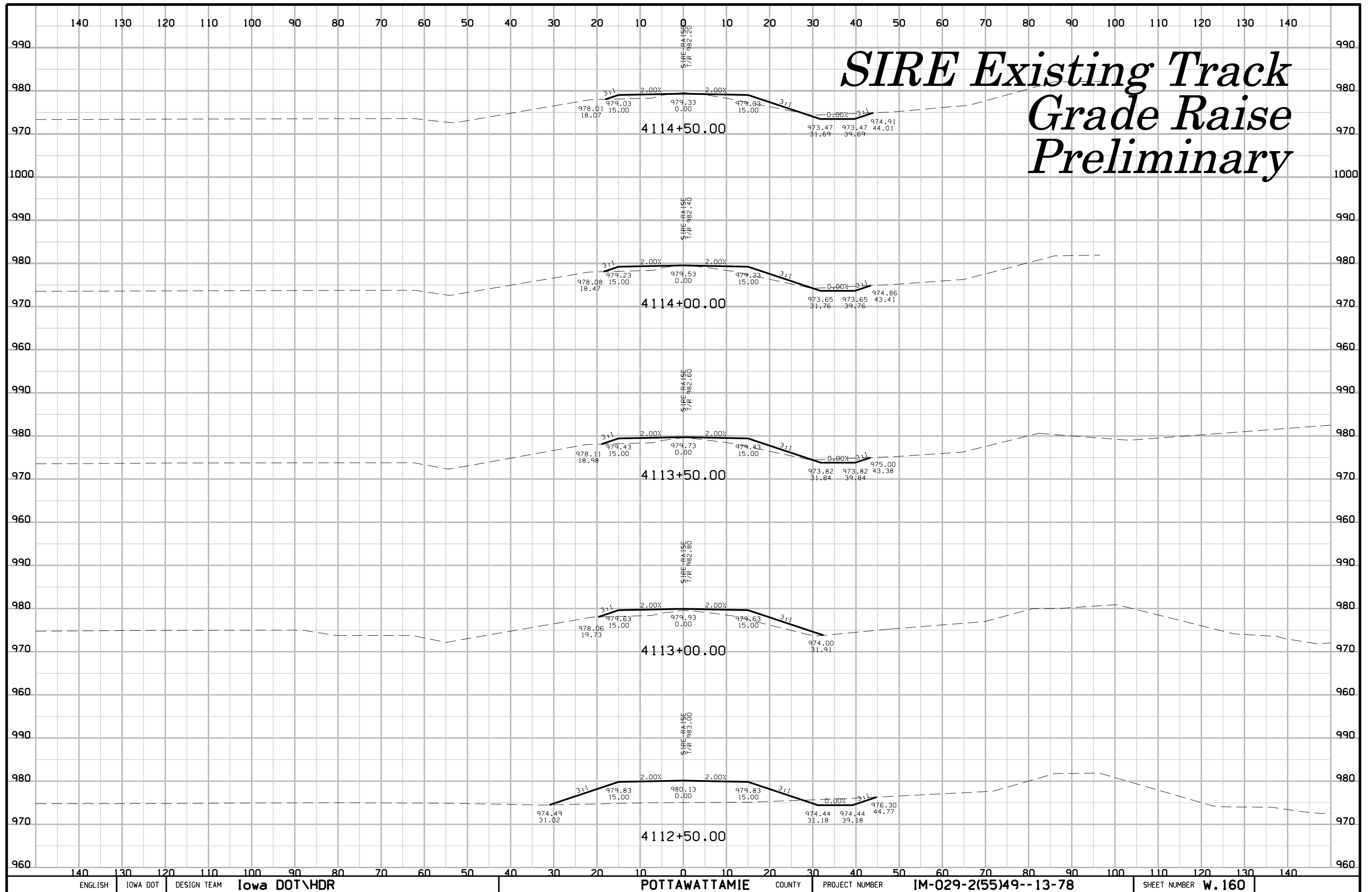


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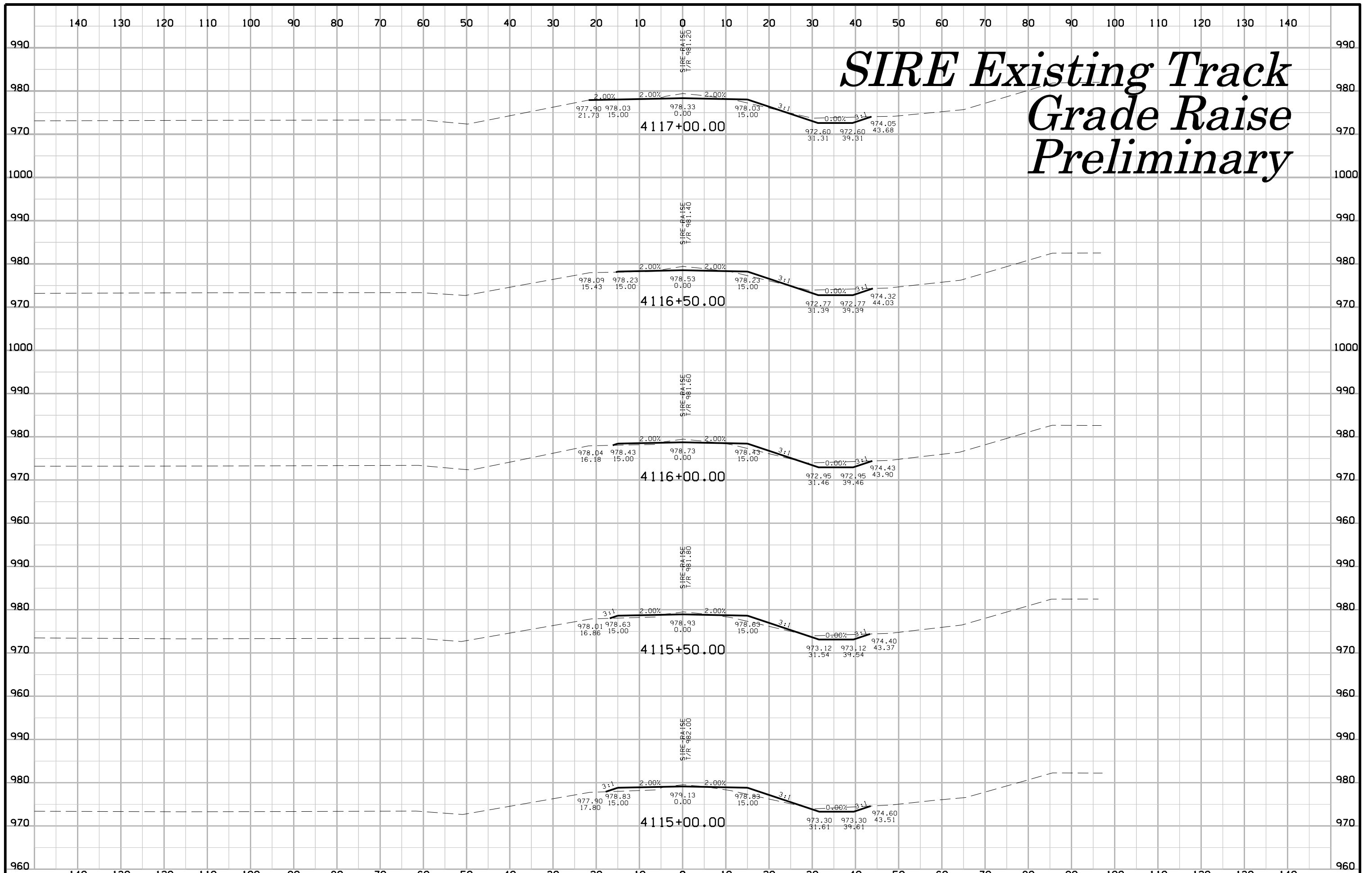


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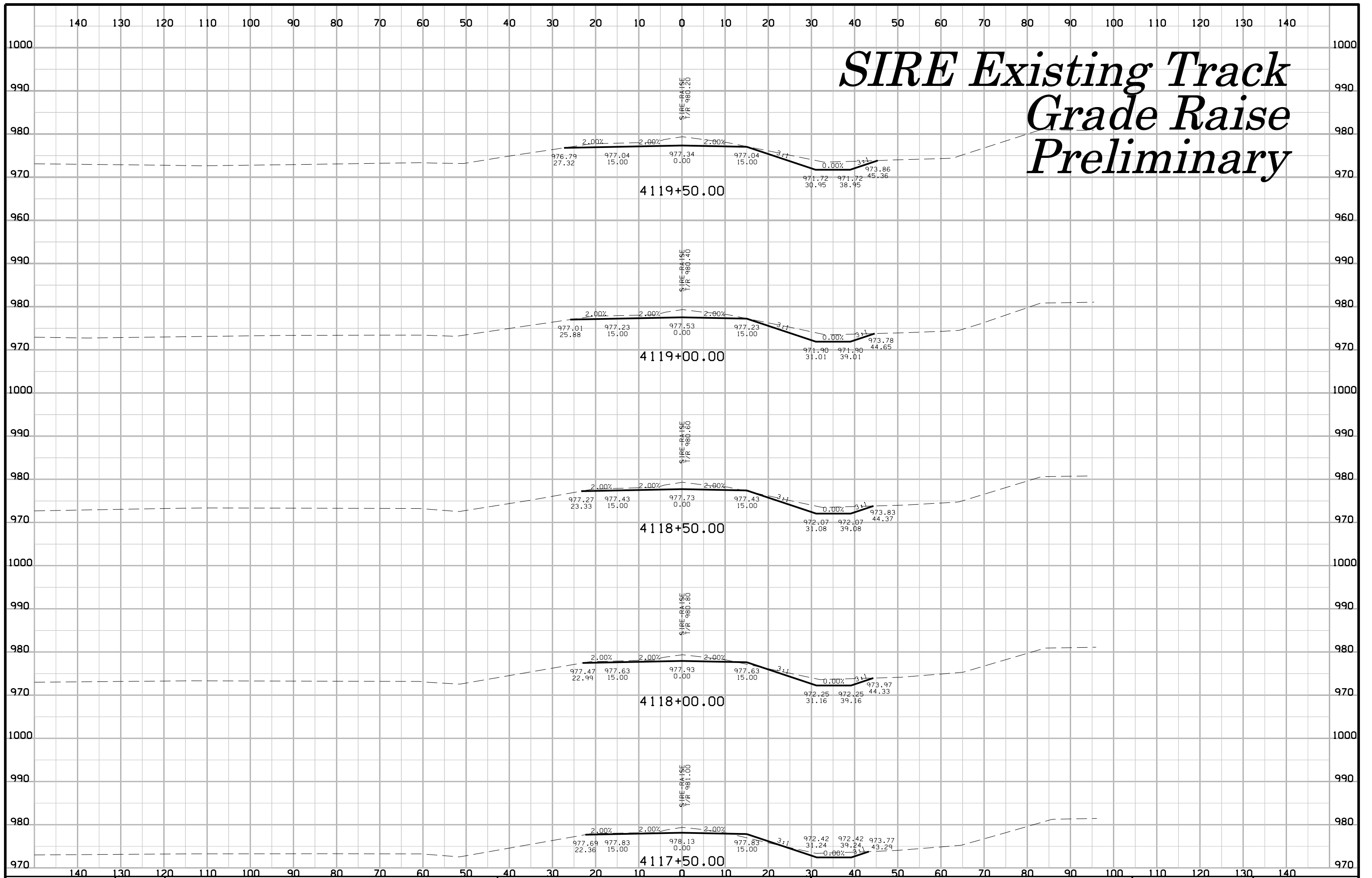




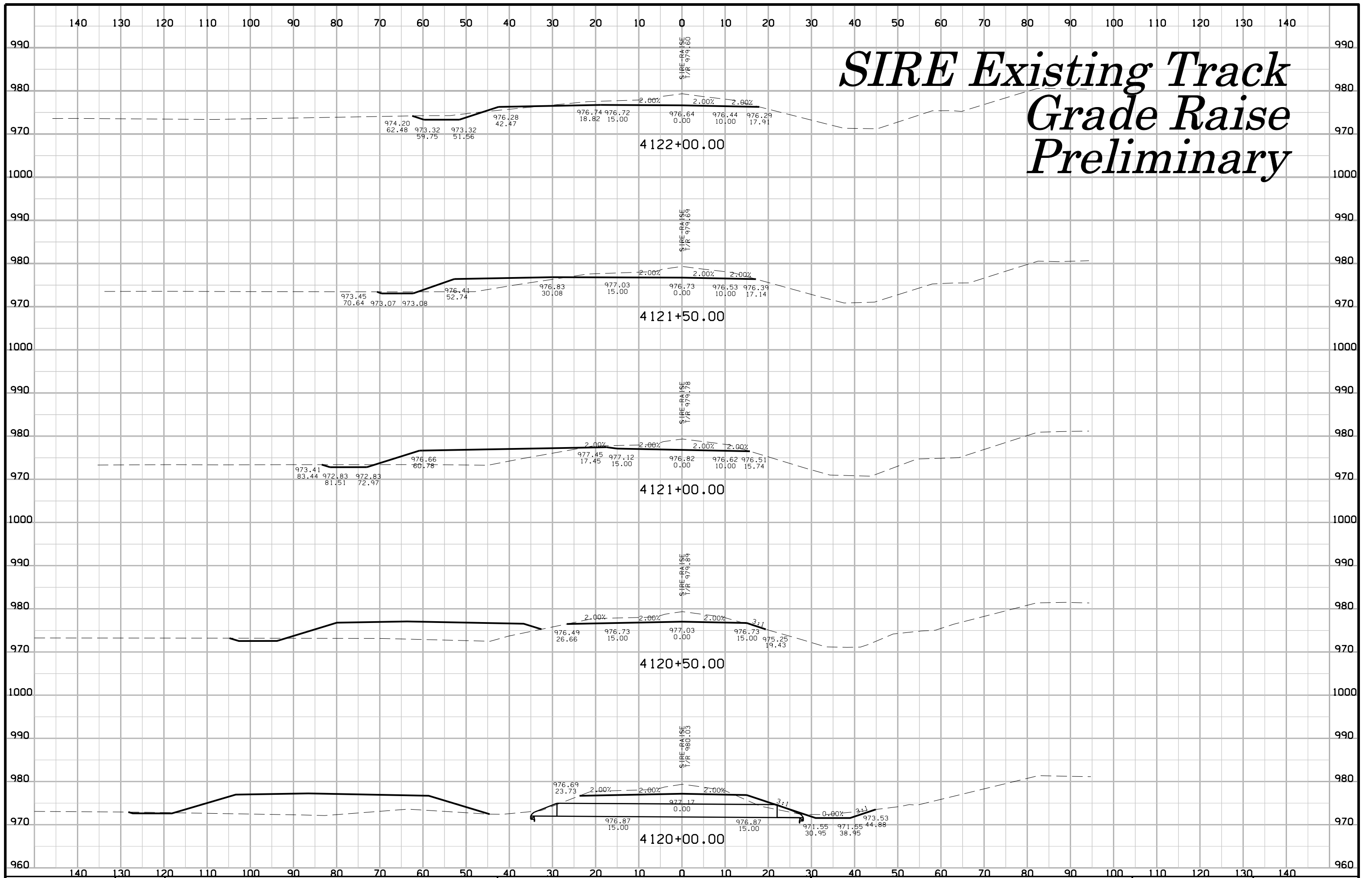
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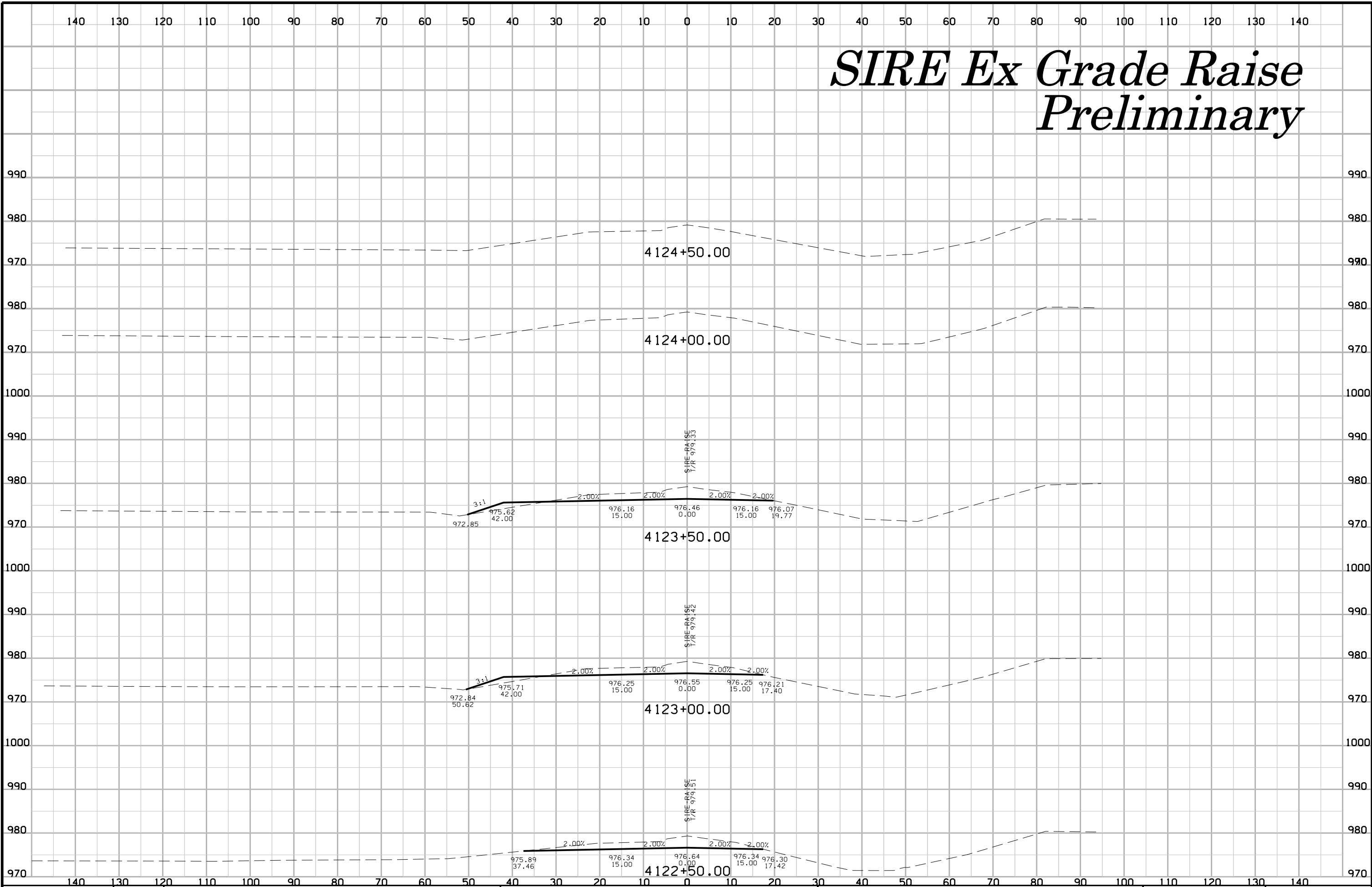
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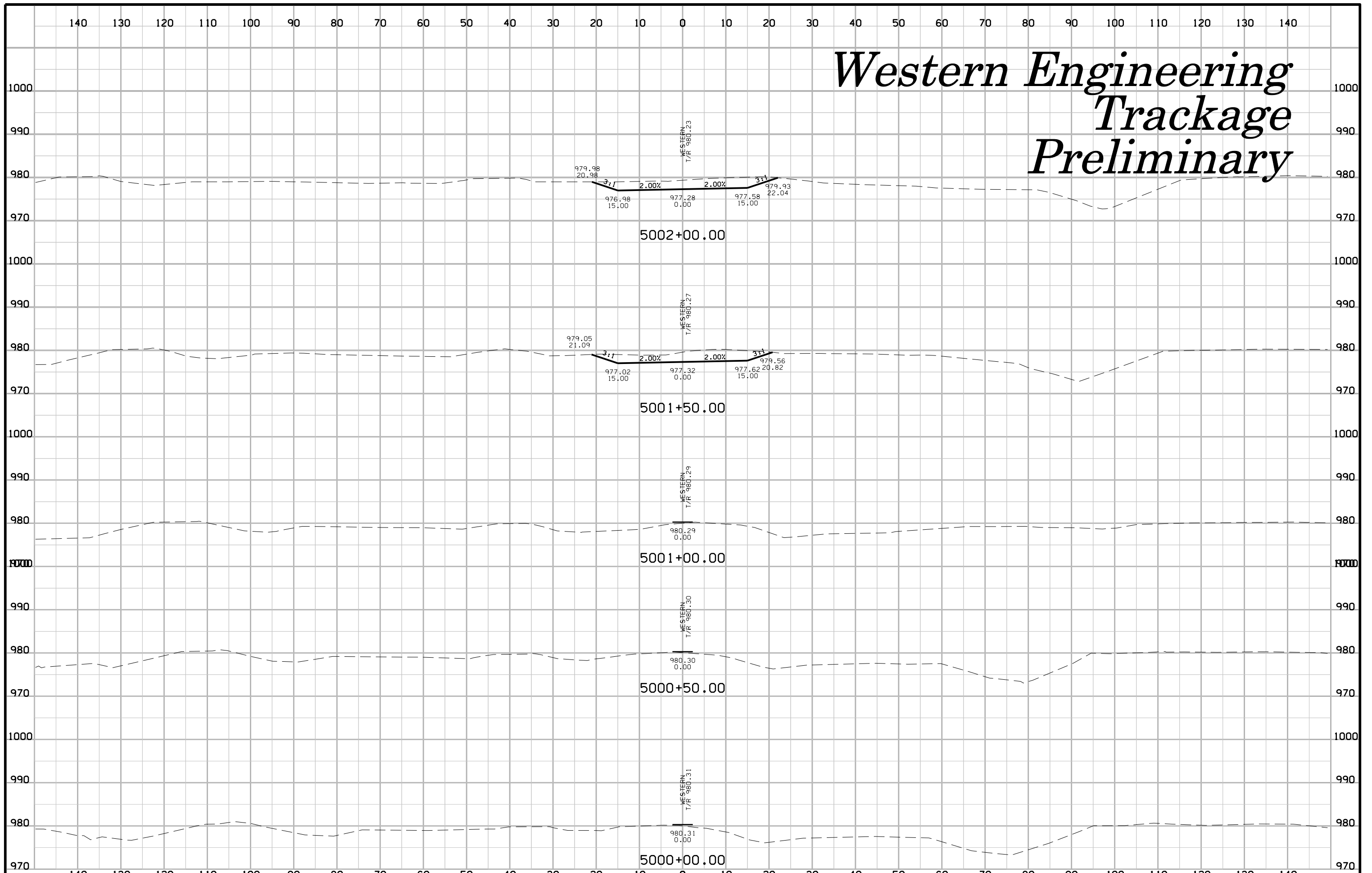
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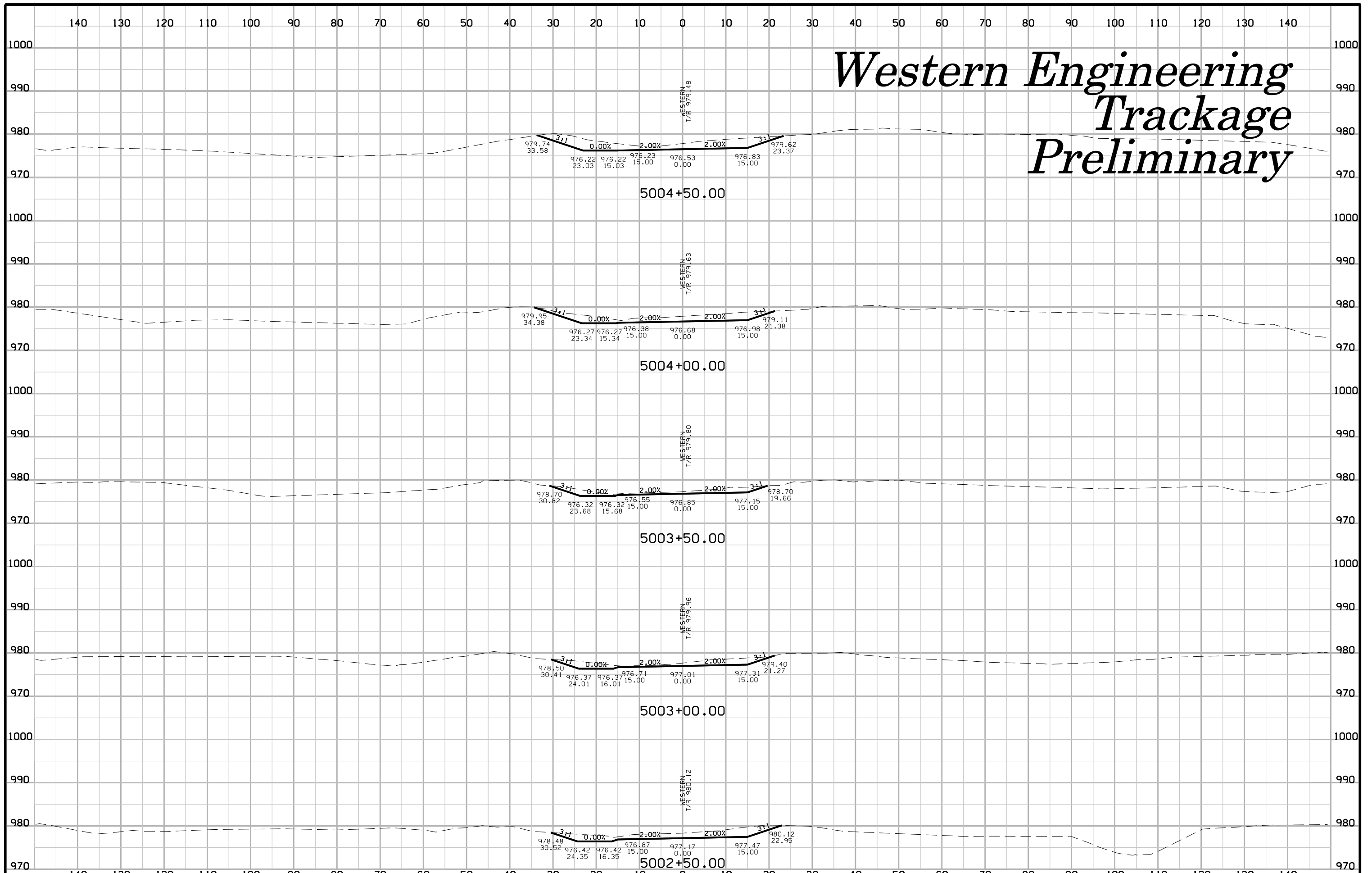
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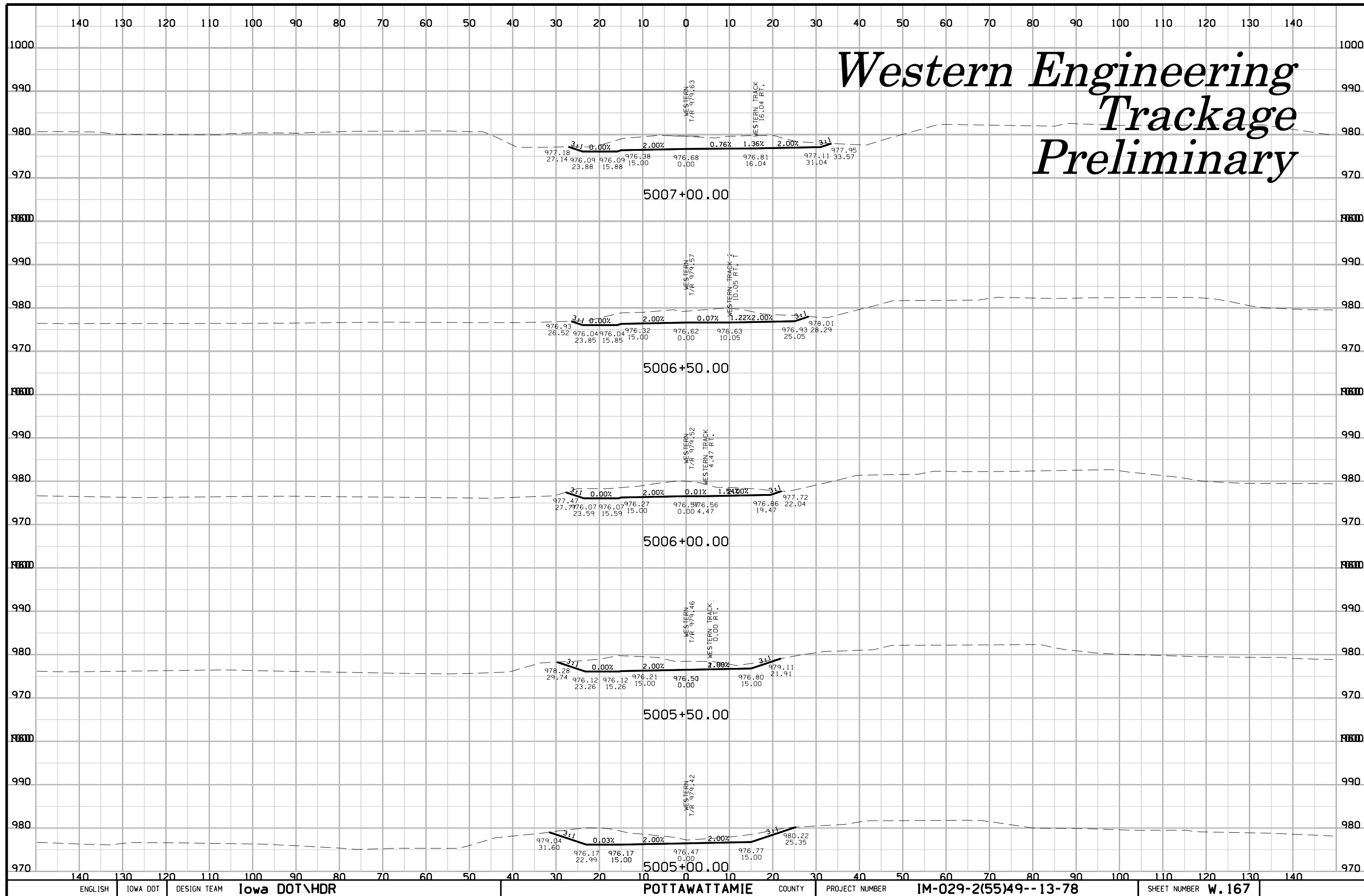


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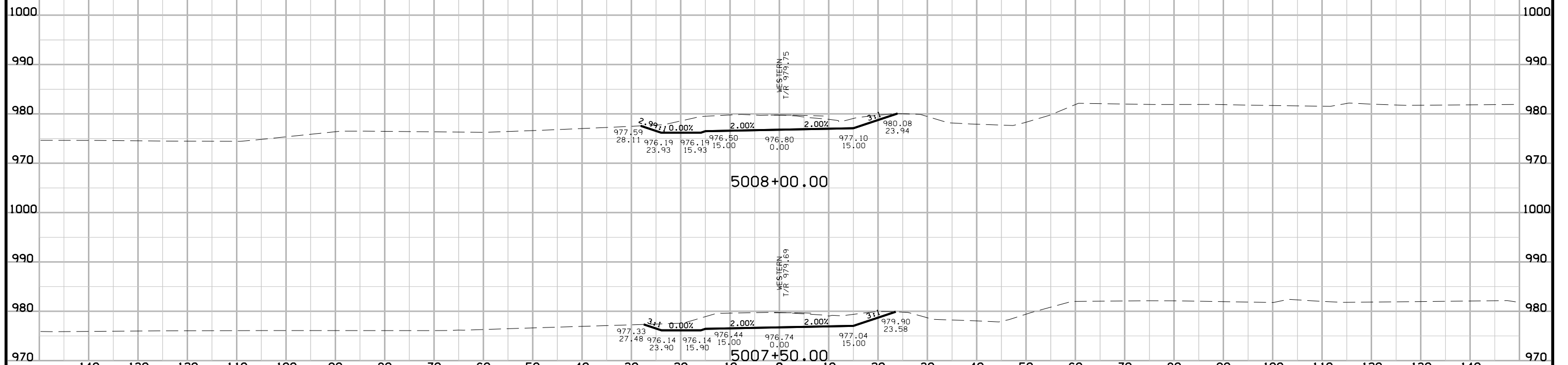
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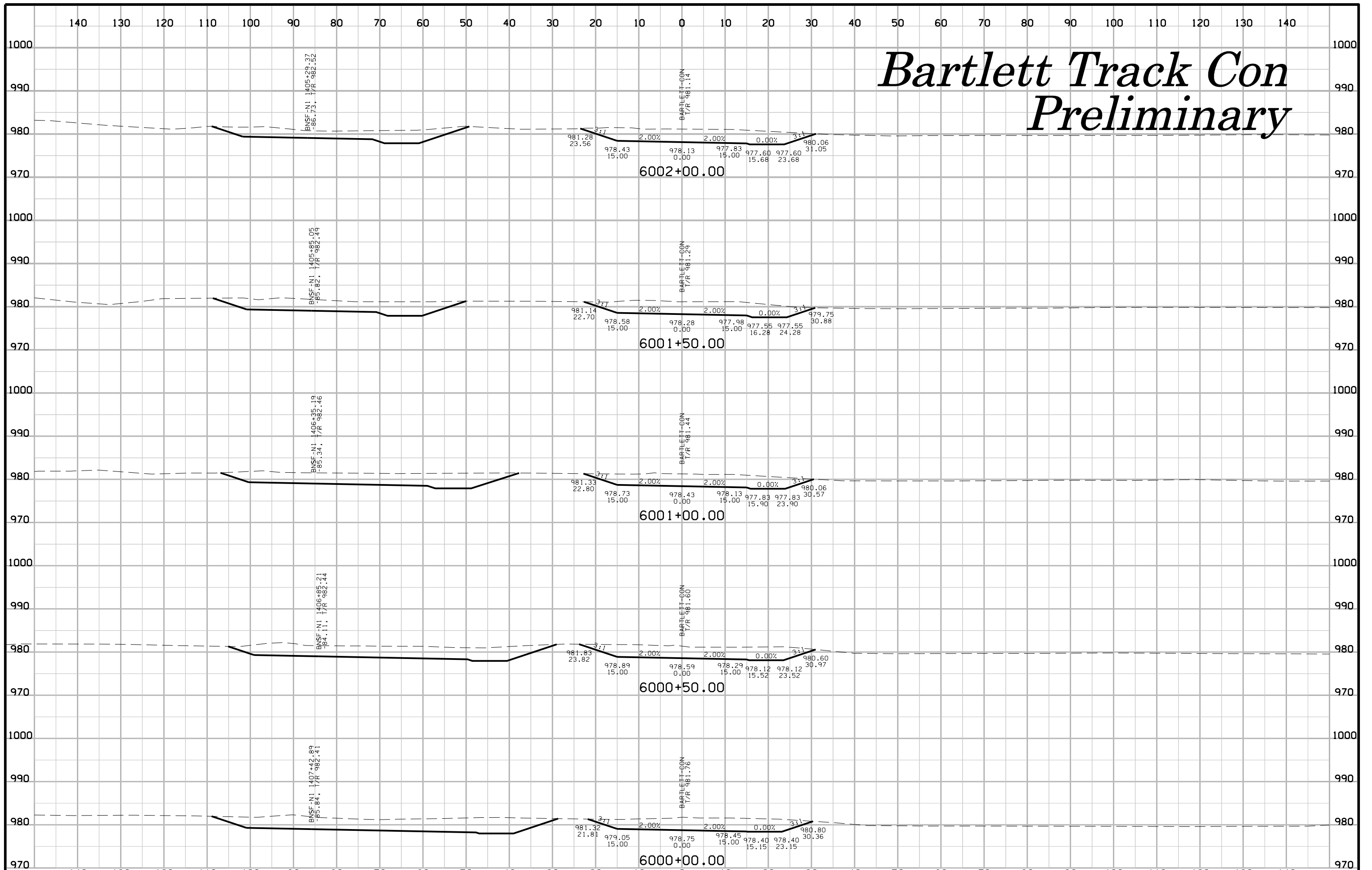


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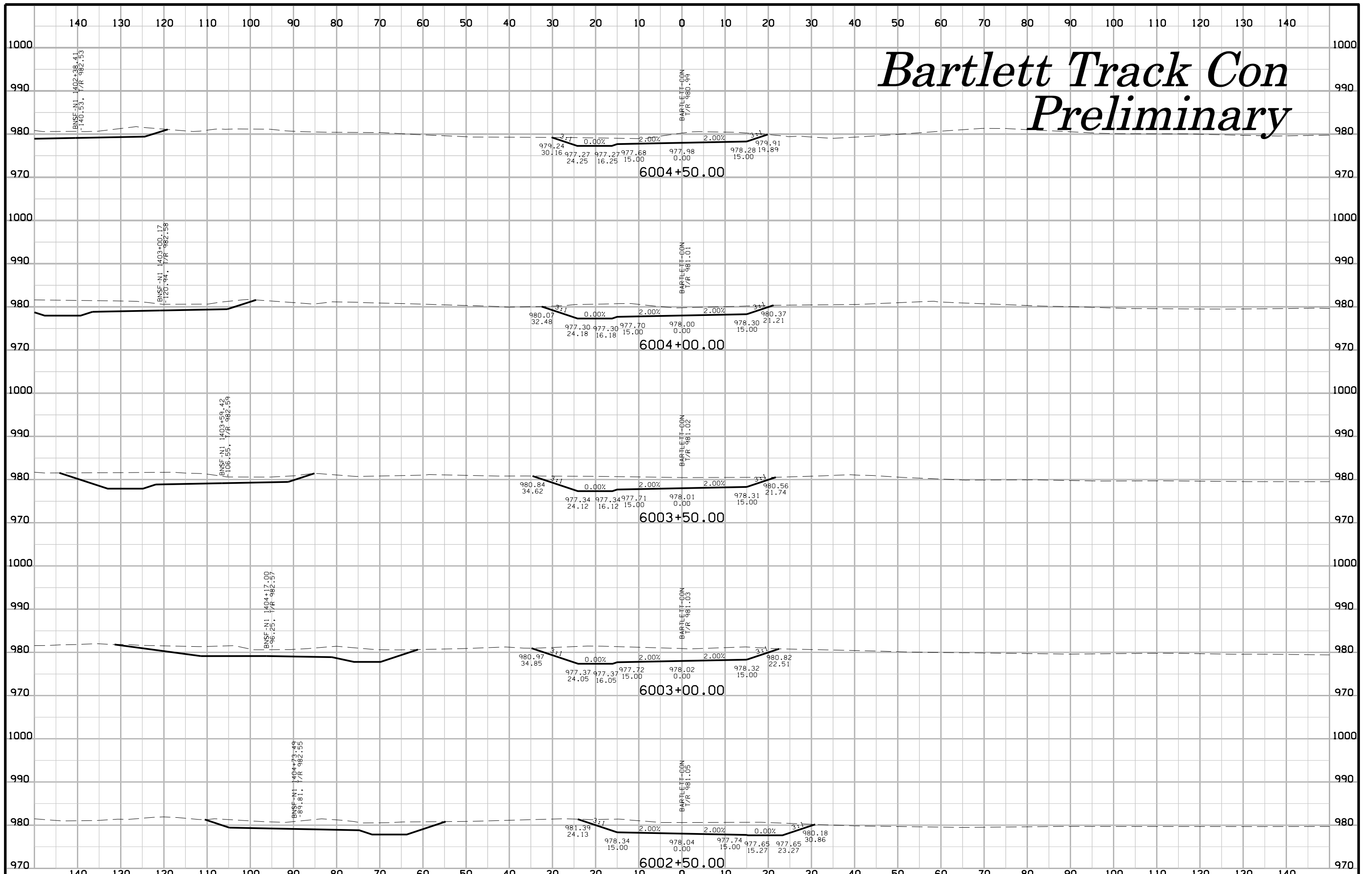
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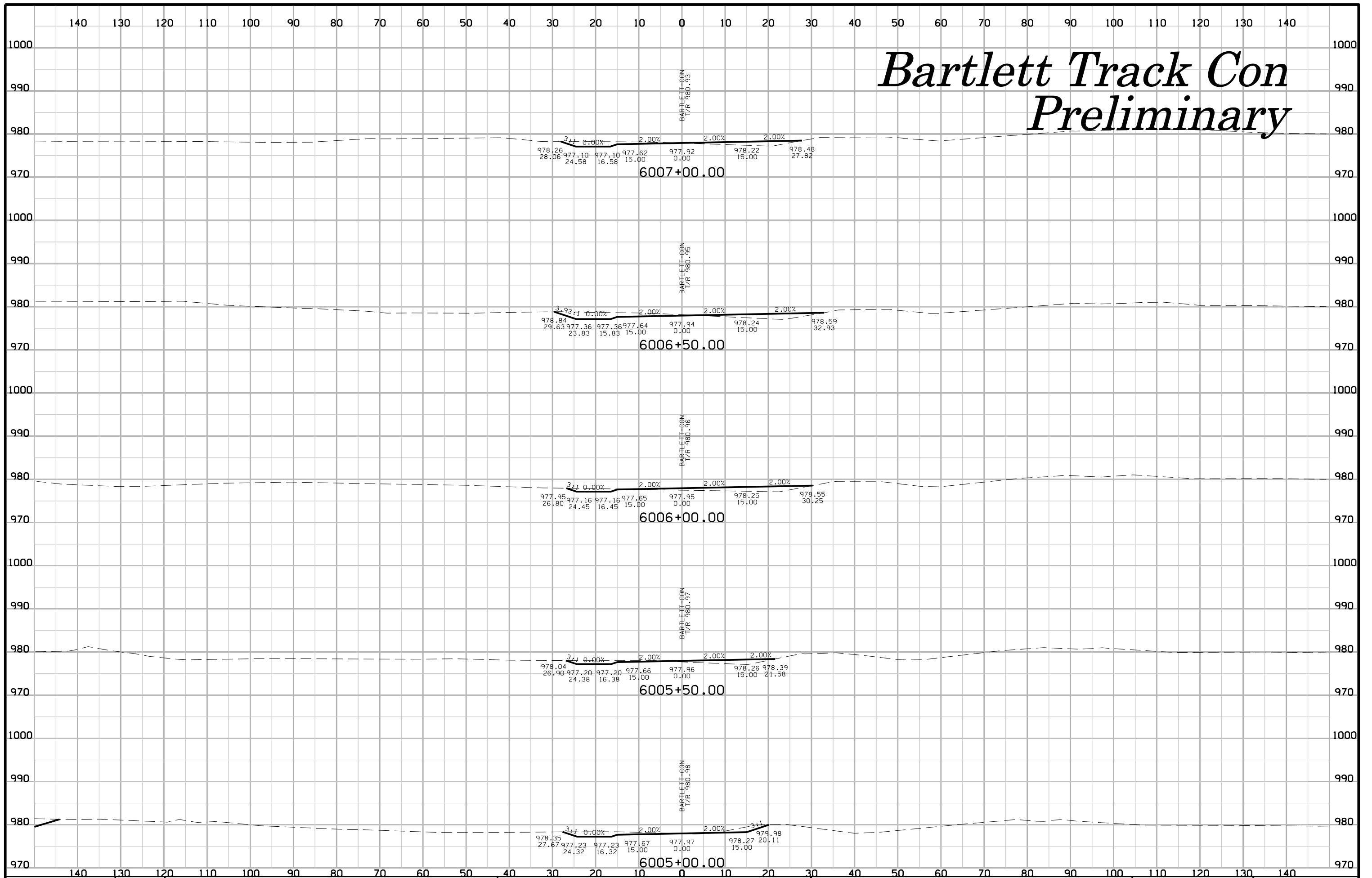
Bartlett Track Con Preliminary



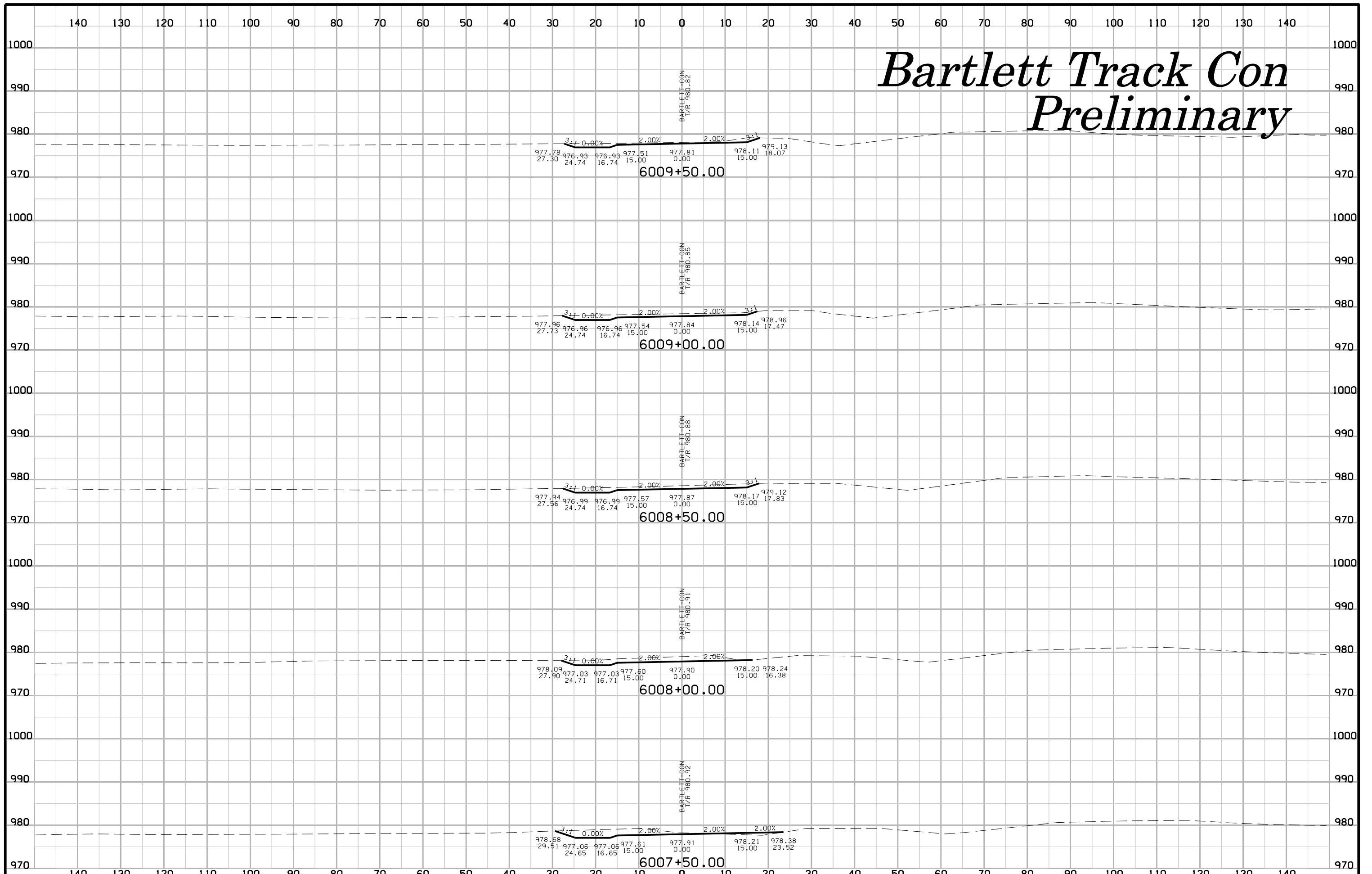
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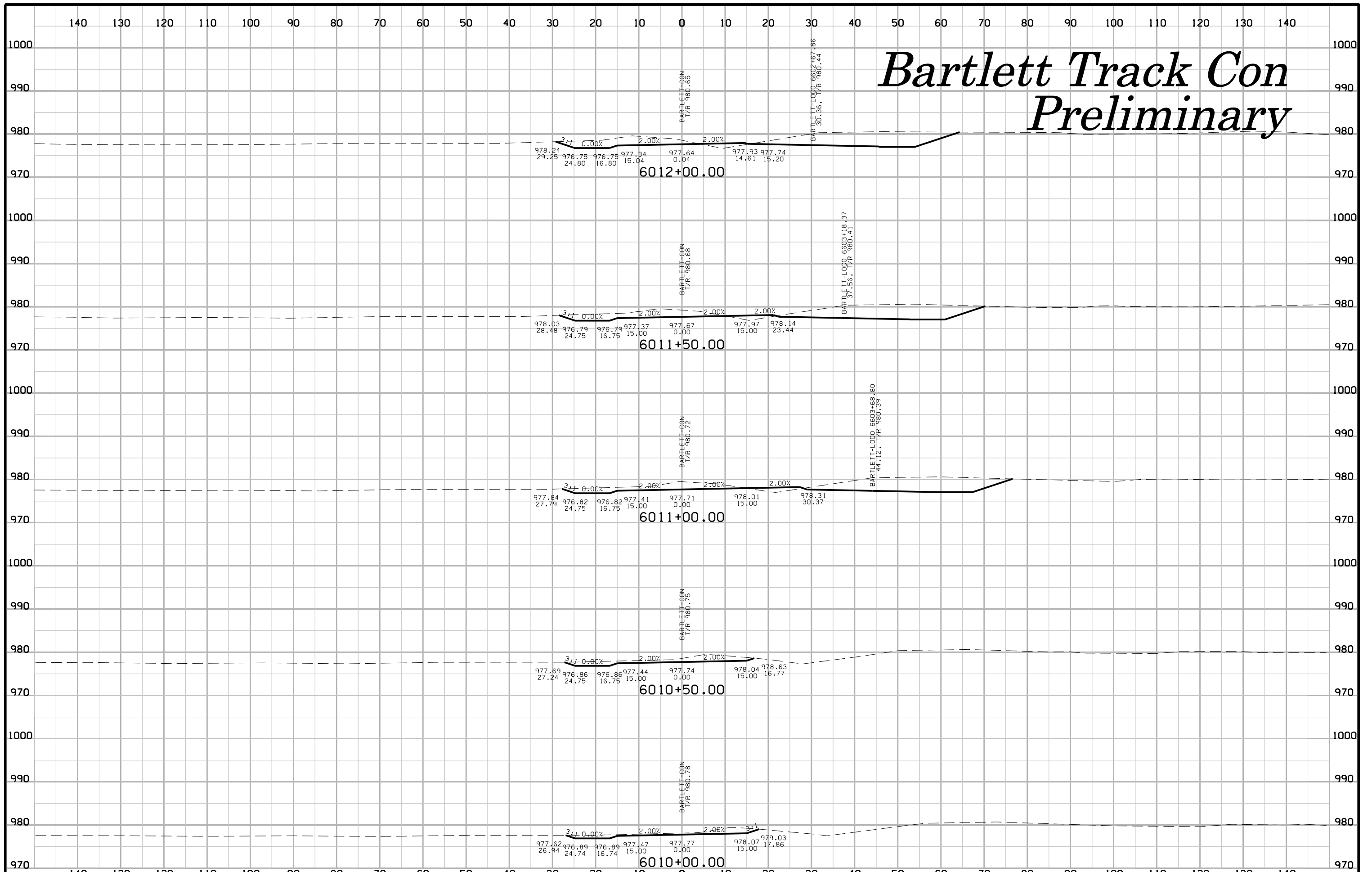
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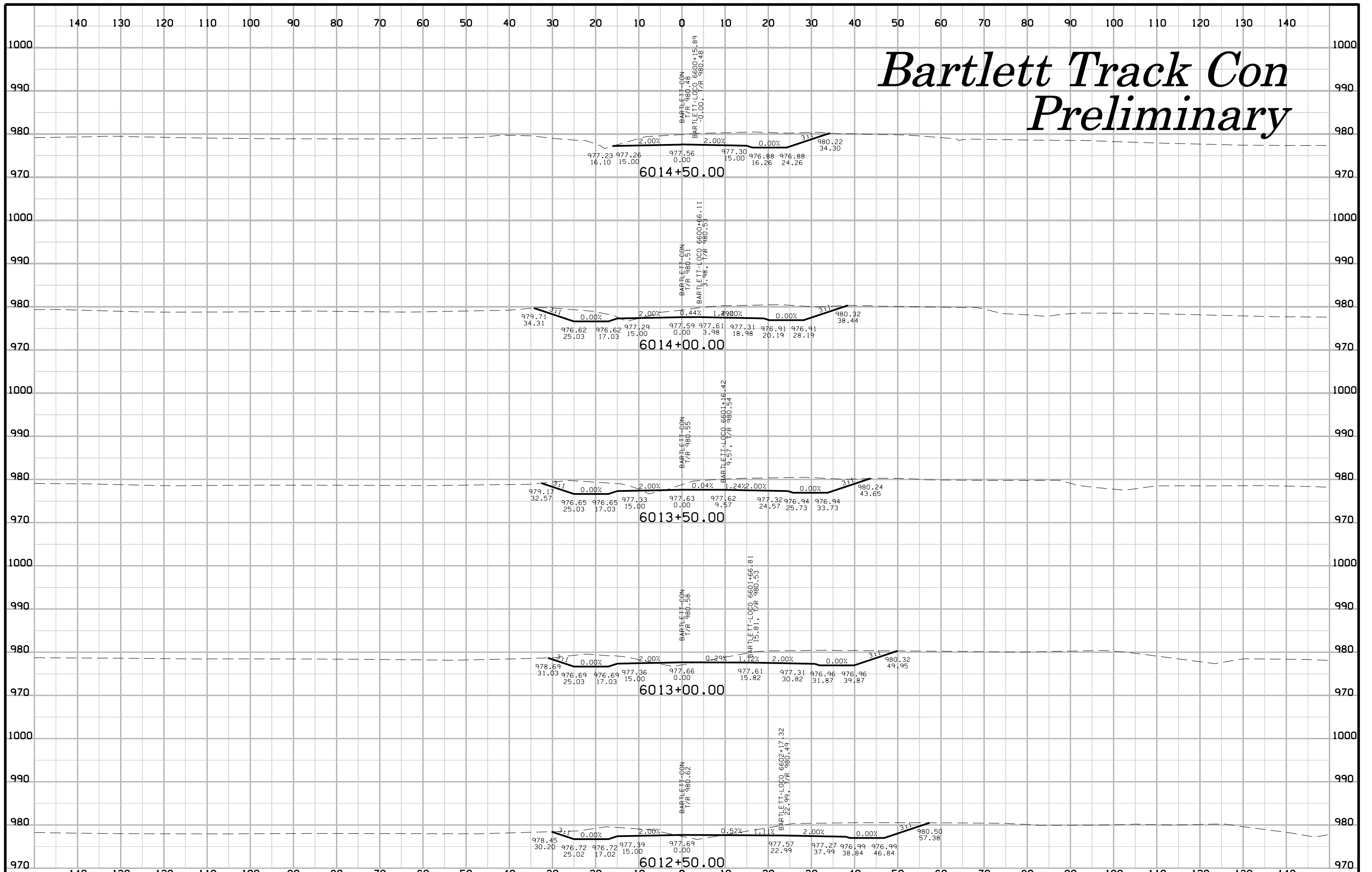
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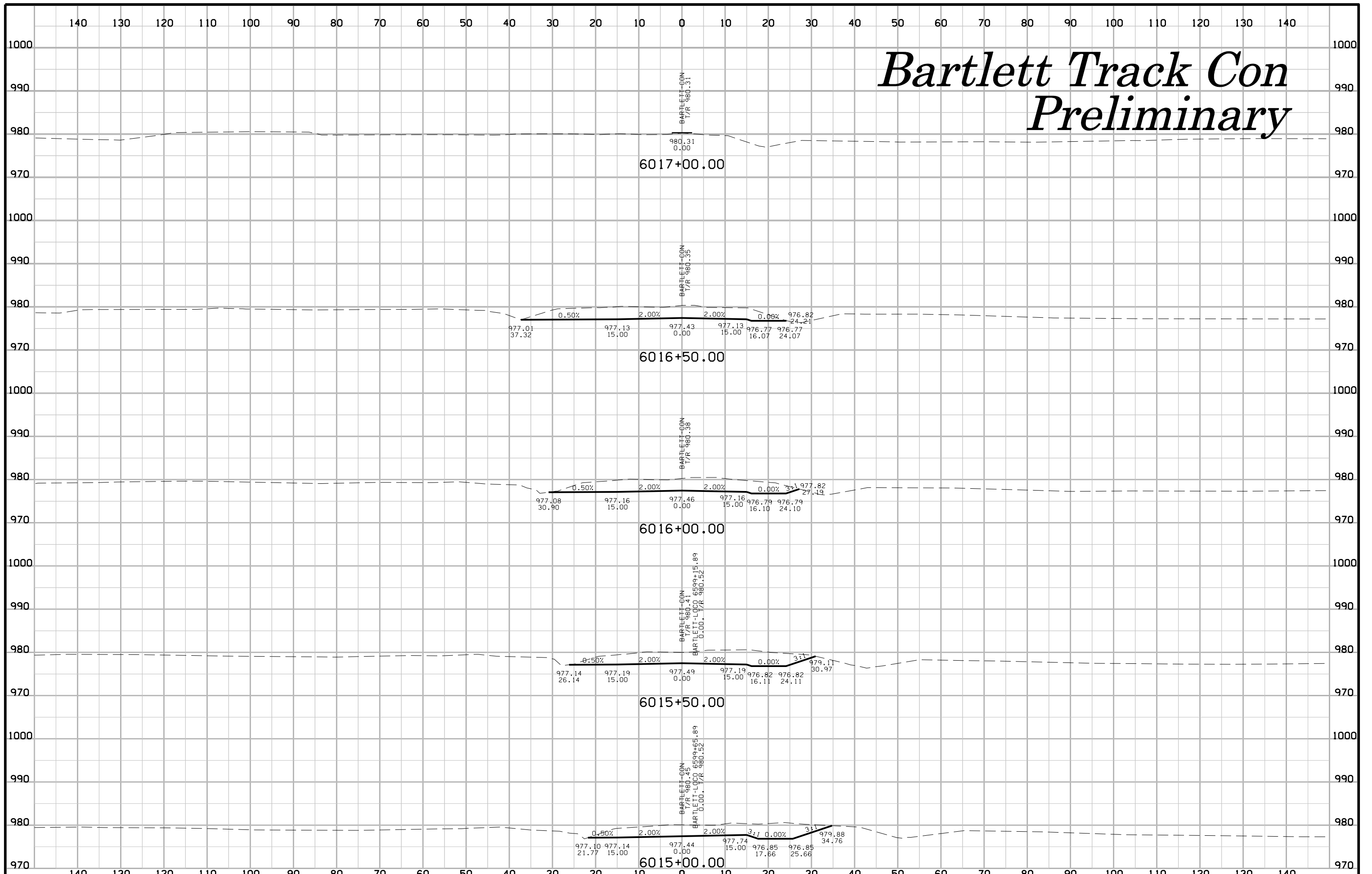
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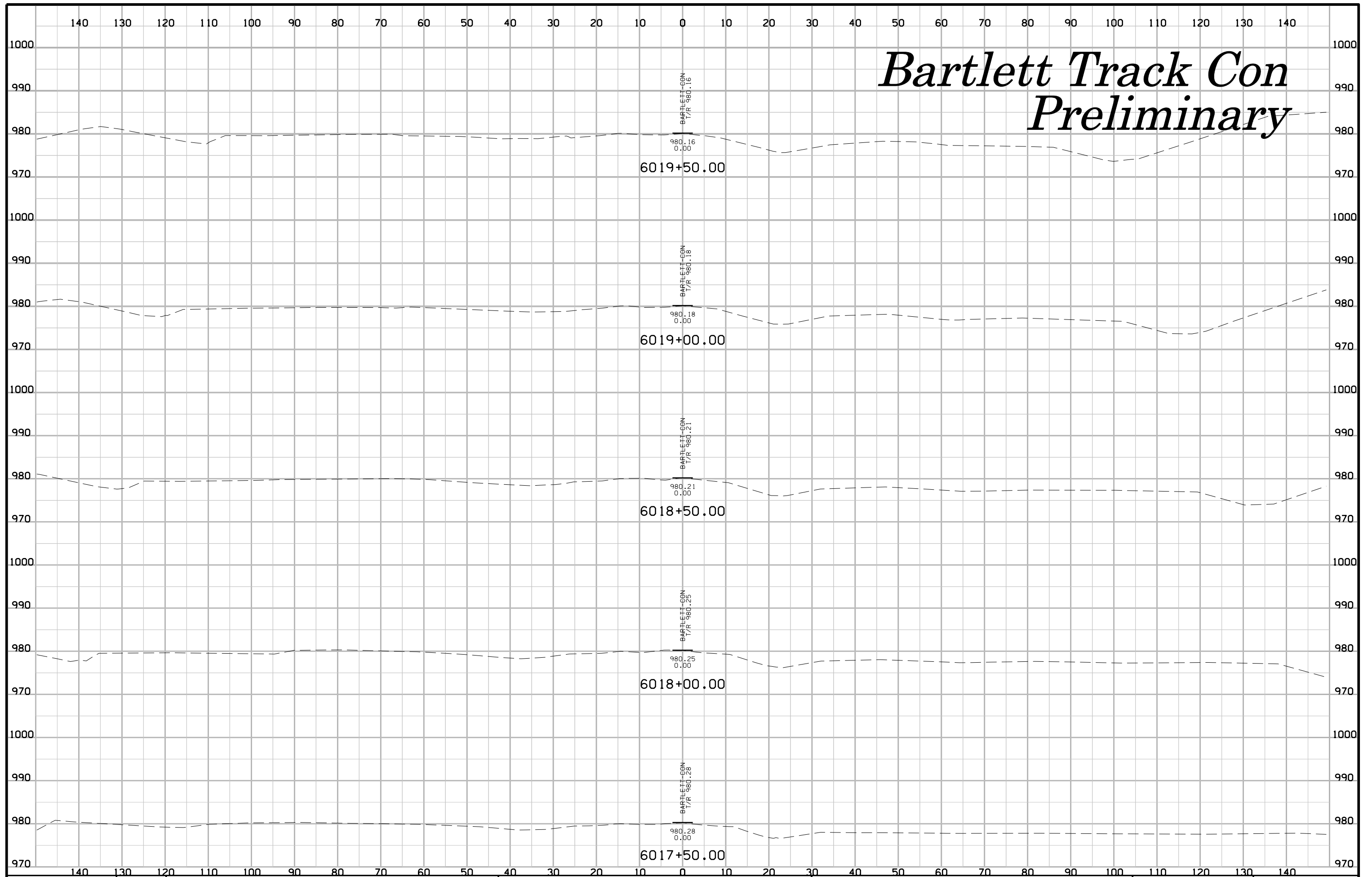
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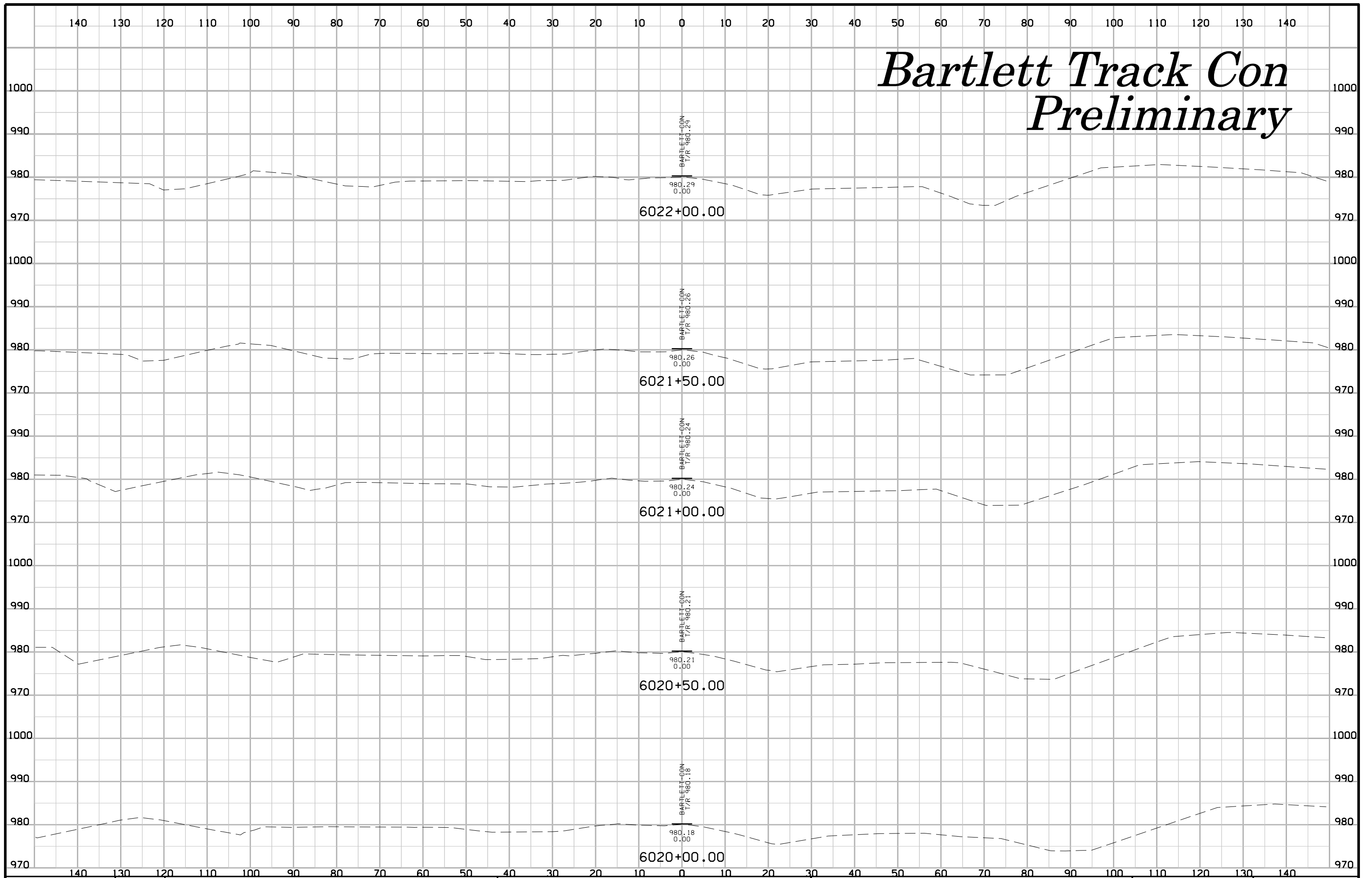
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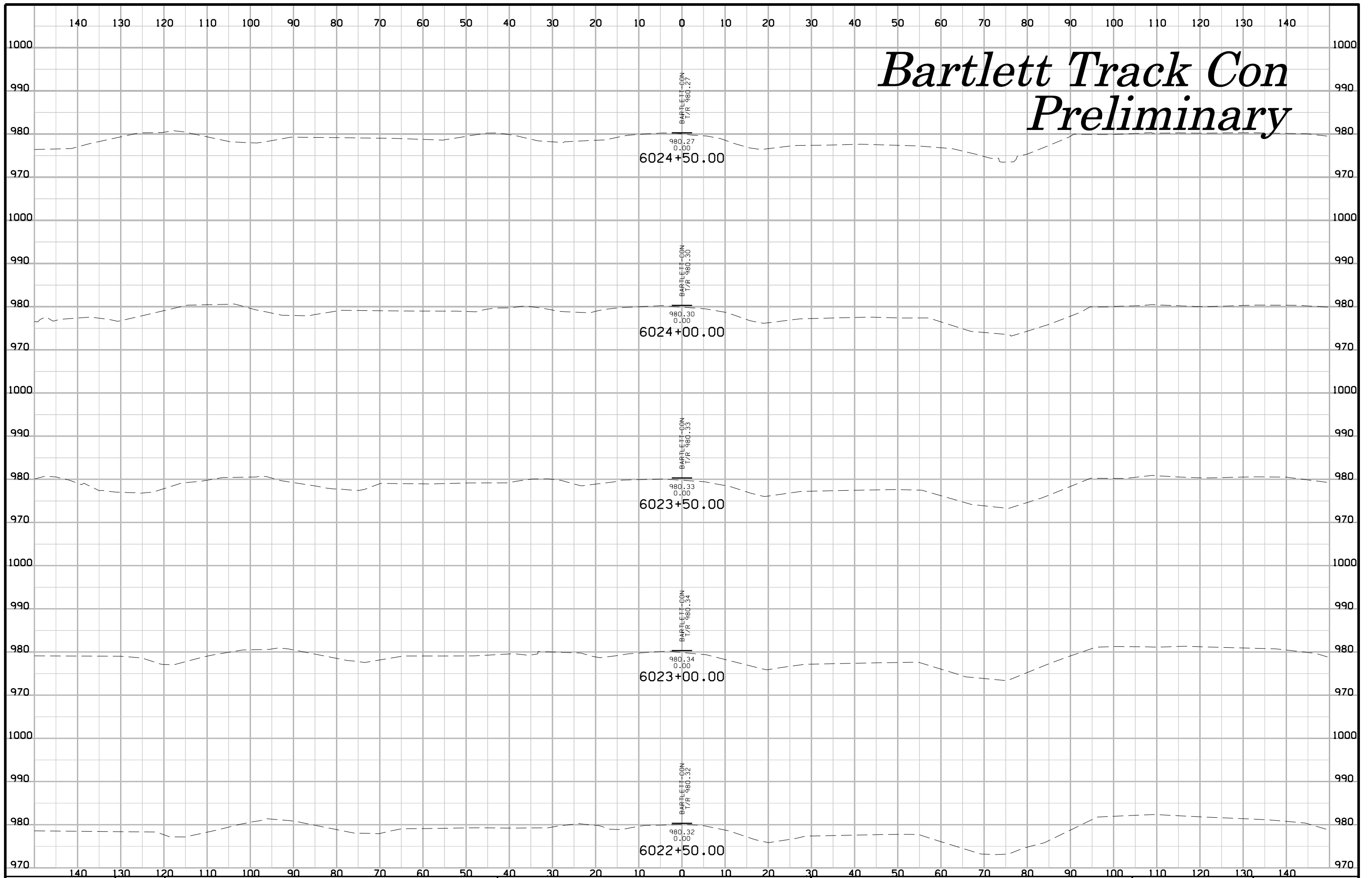
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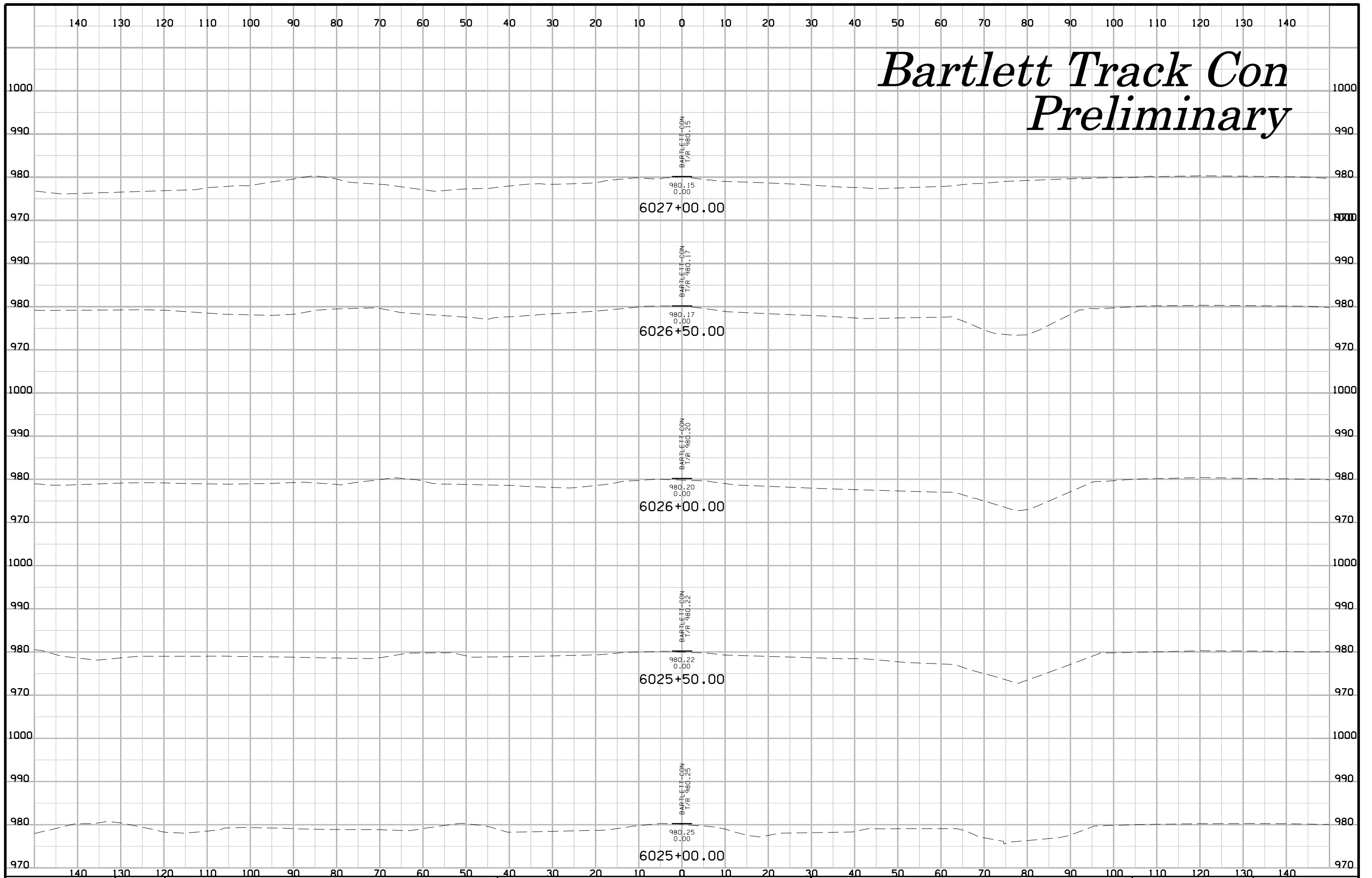
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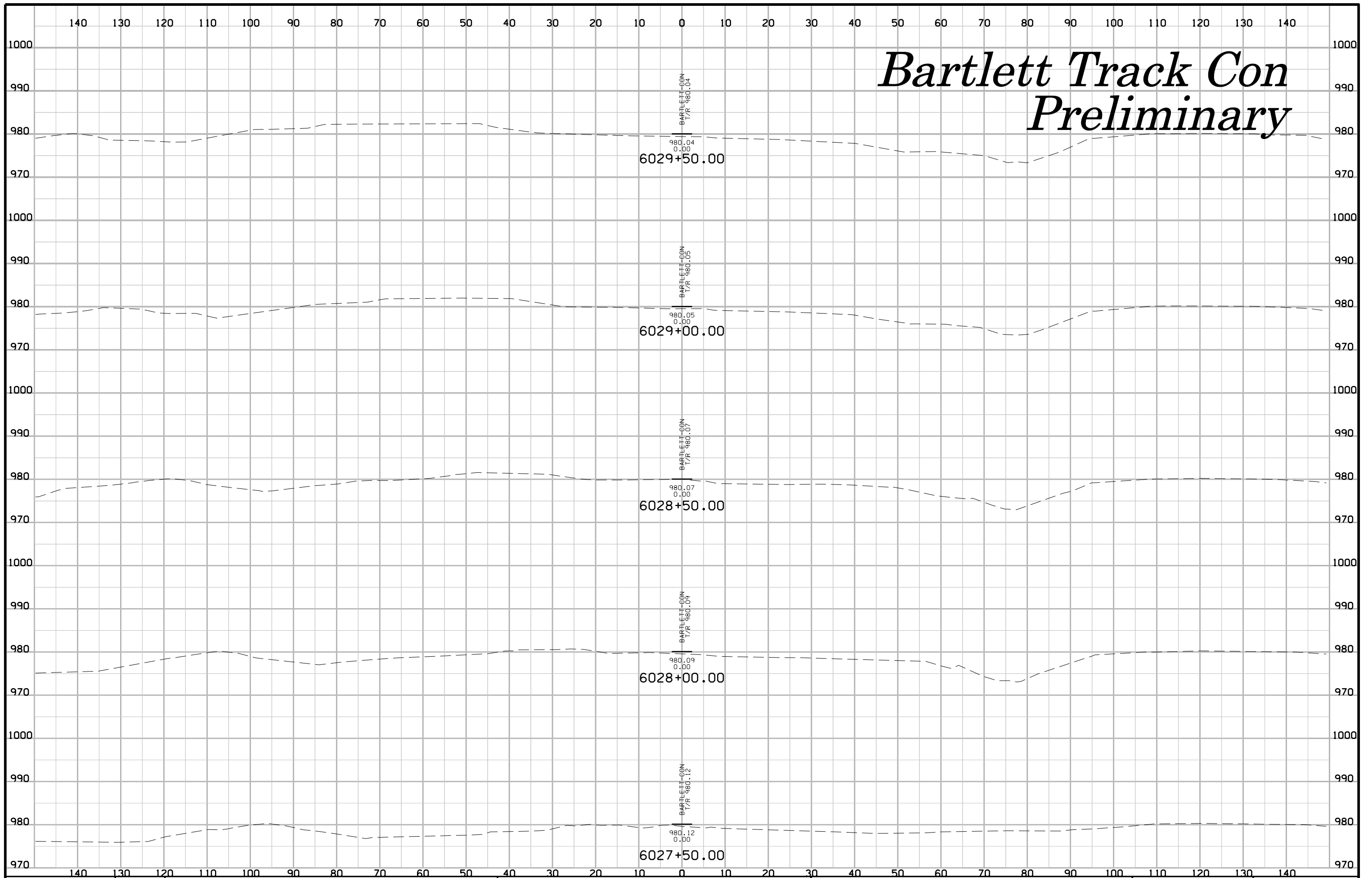
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Bartlett Track Con Preliminary

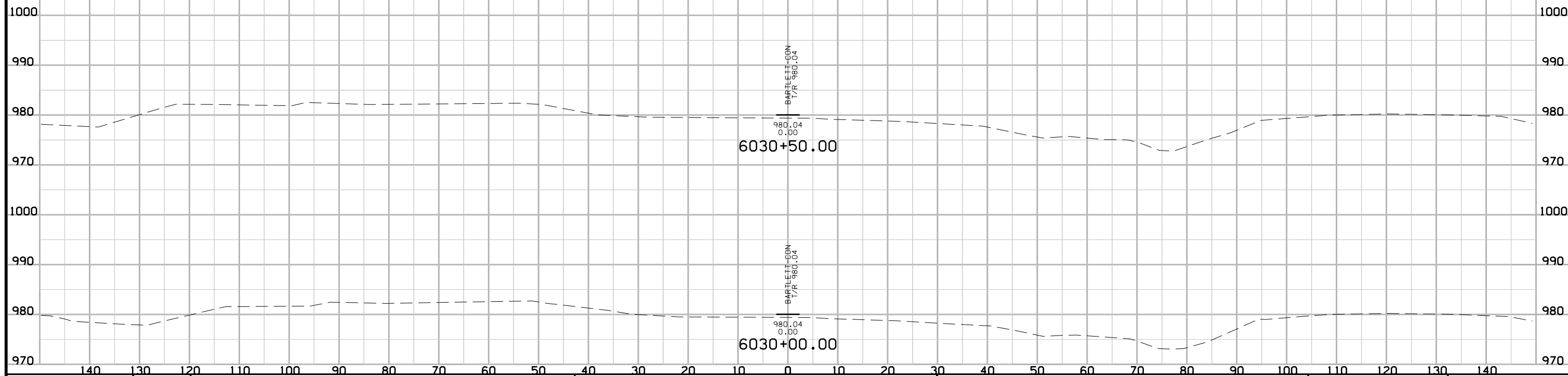


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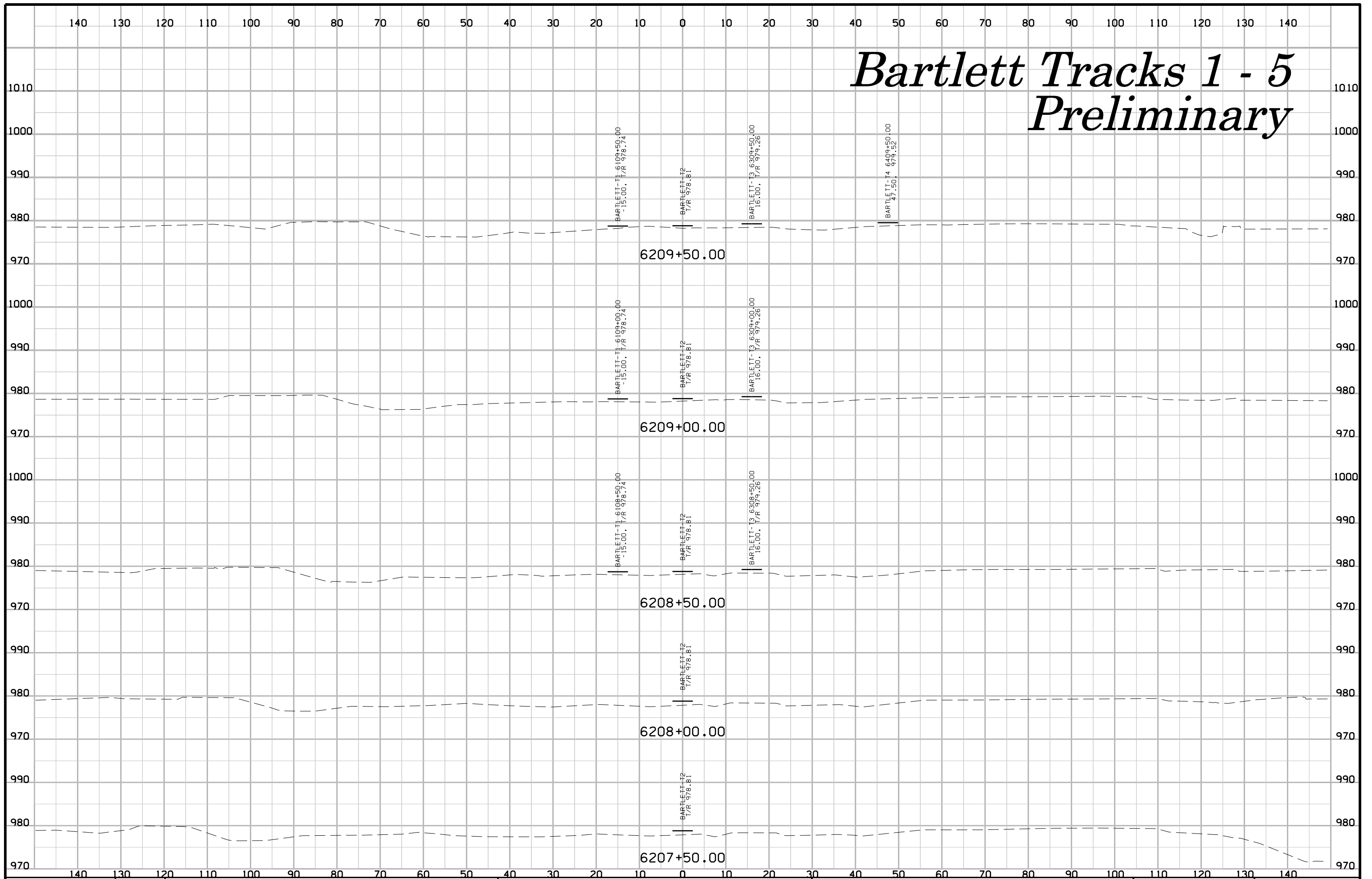
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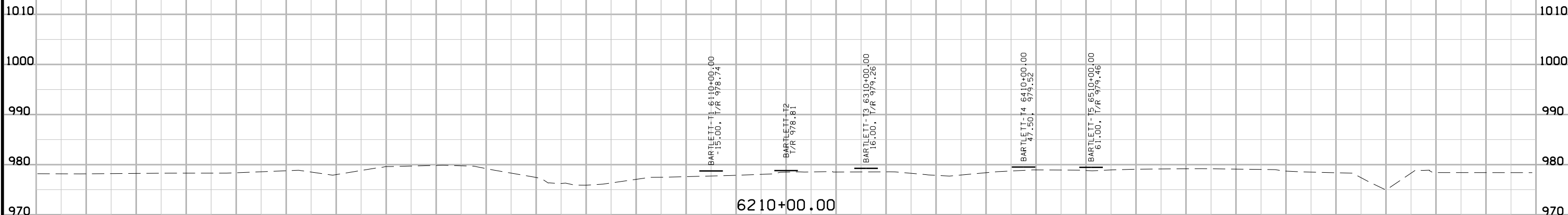
ENGLISH IOWA DOT DESIGN TEAM Iowa DOT\HDR POTTAWATTAMIE COUNTY PROJECT NUMBER IM-029-2(55)49--13-78 SHEET NUMBER W.181

Bartlett Tracks 1 - 5 Preliminary



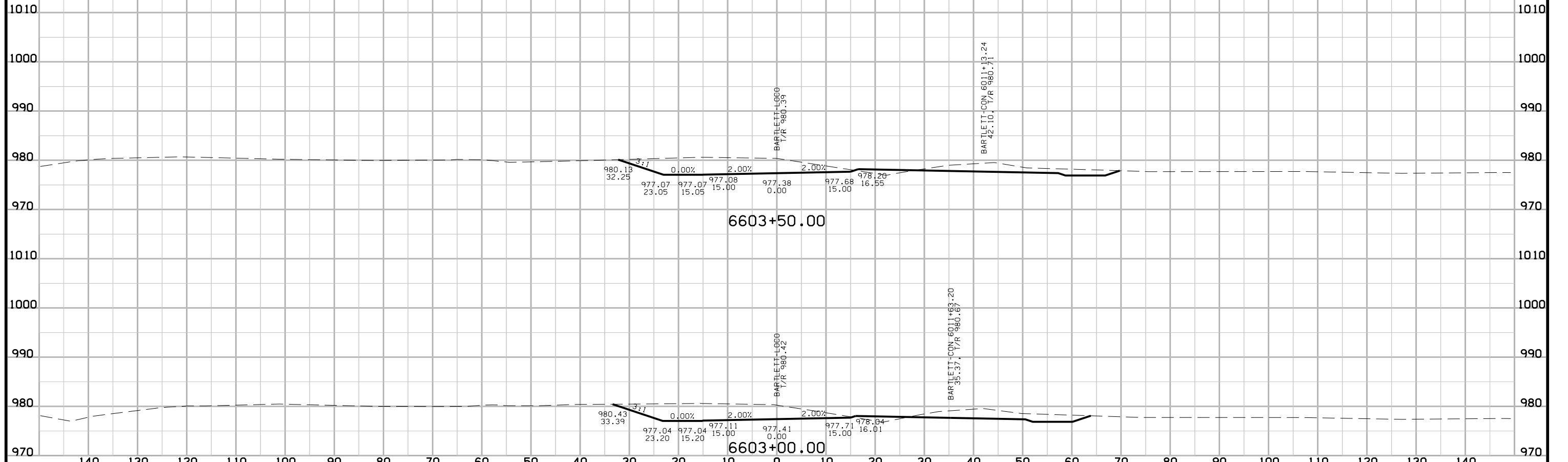
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Bartlett Tracks 1 - 5 Preliminary

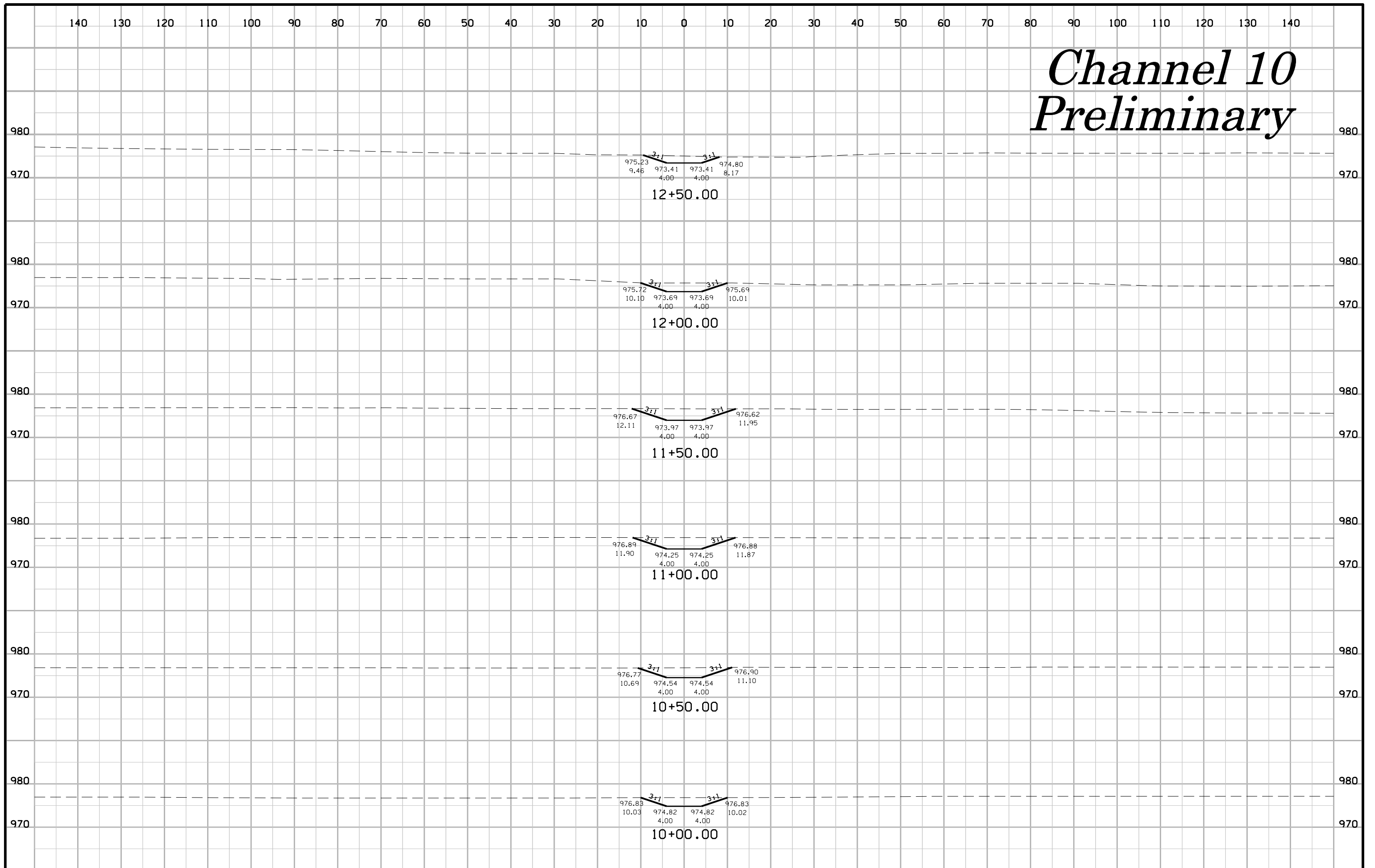


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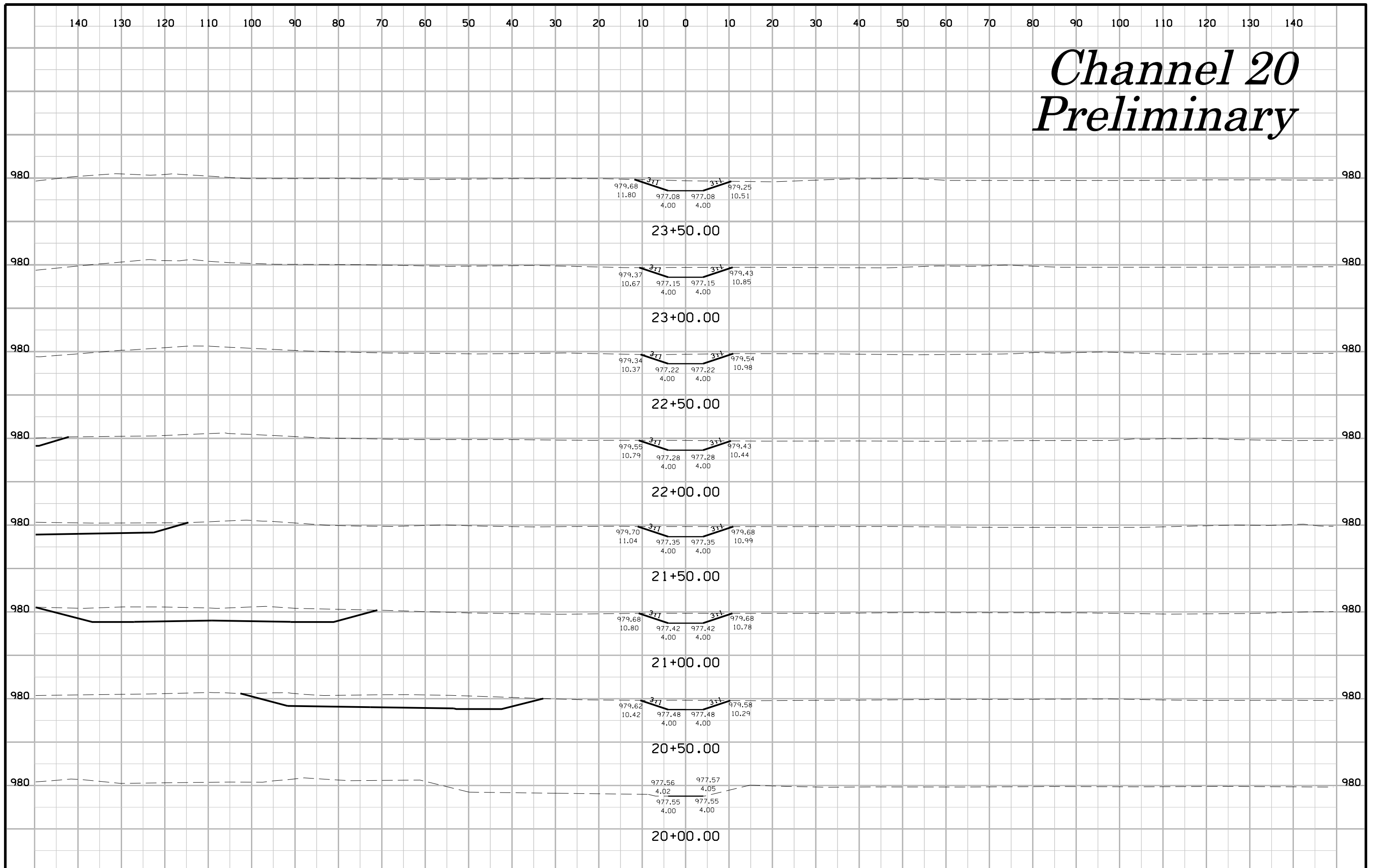
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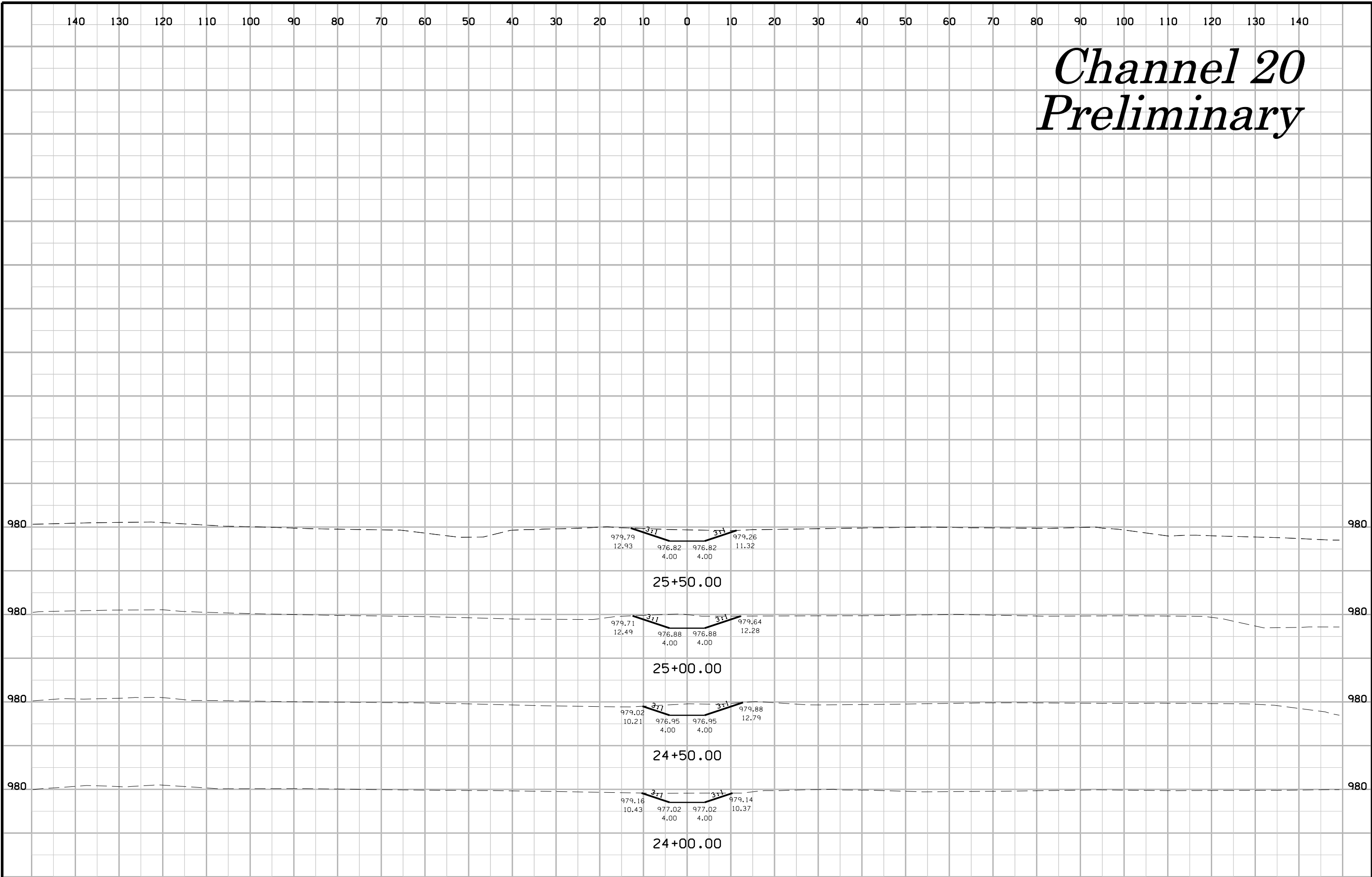
Channel 10 Preliminary



Channel 20 Preliminary

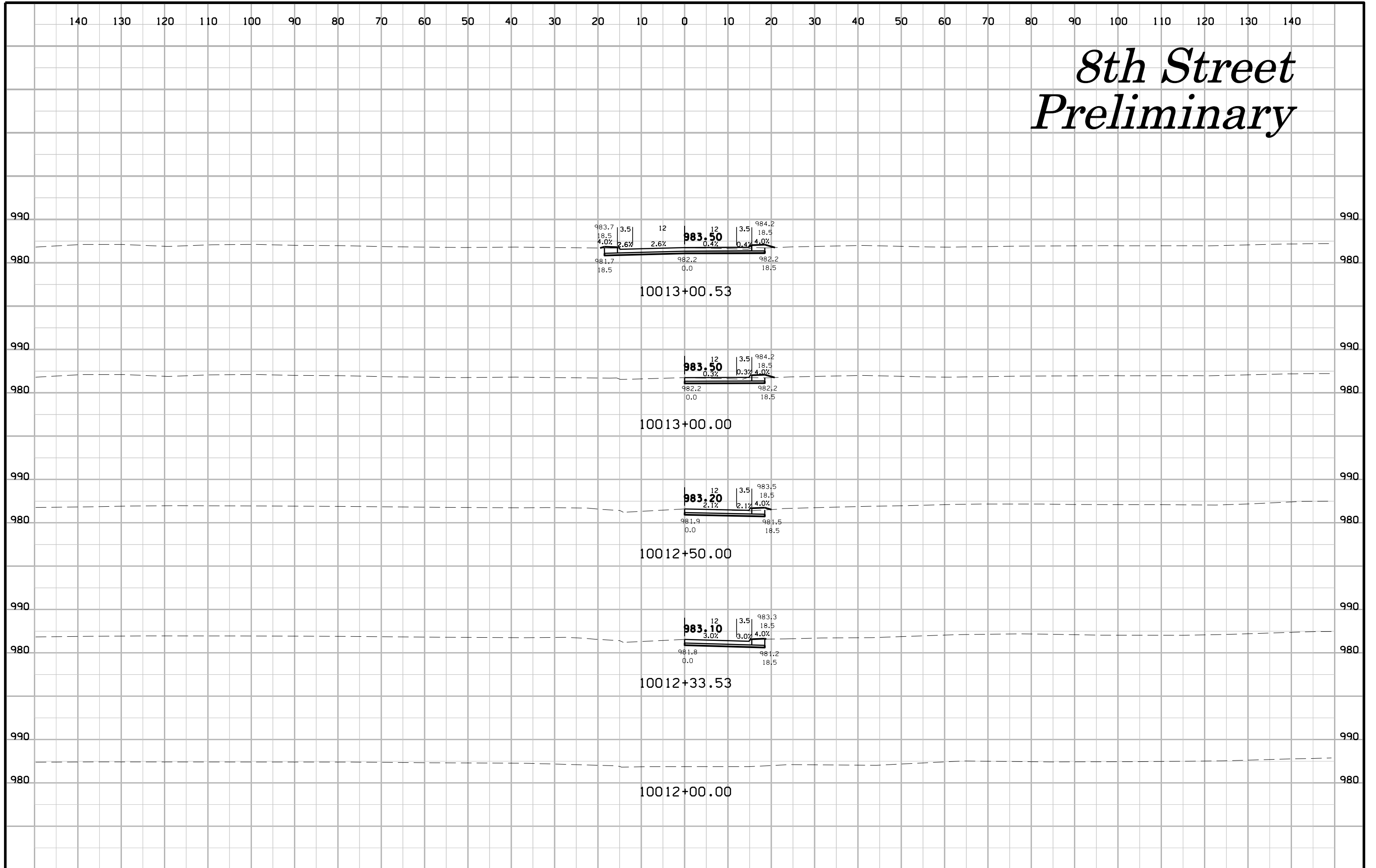


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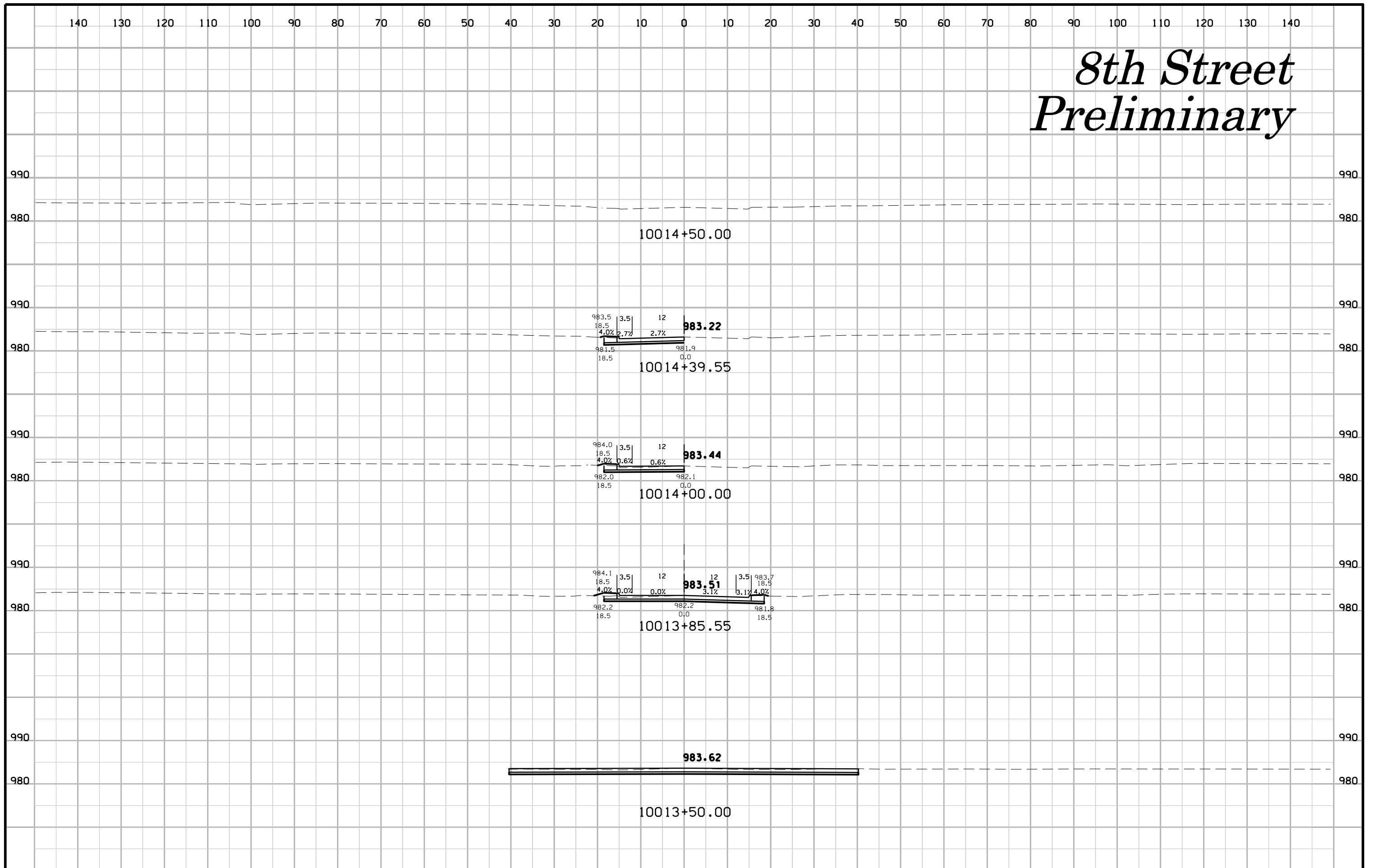


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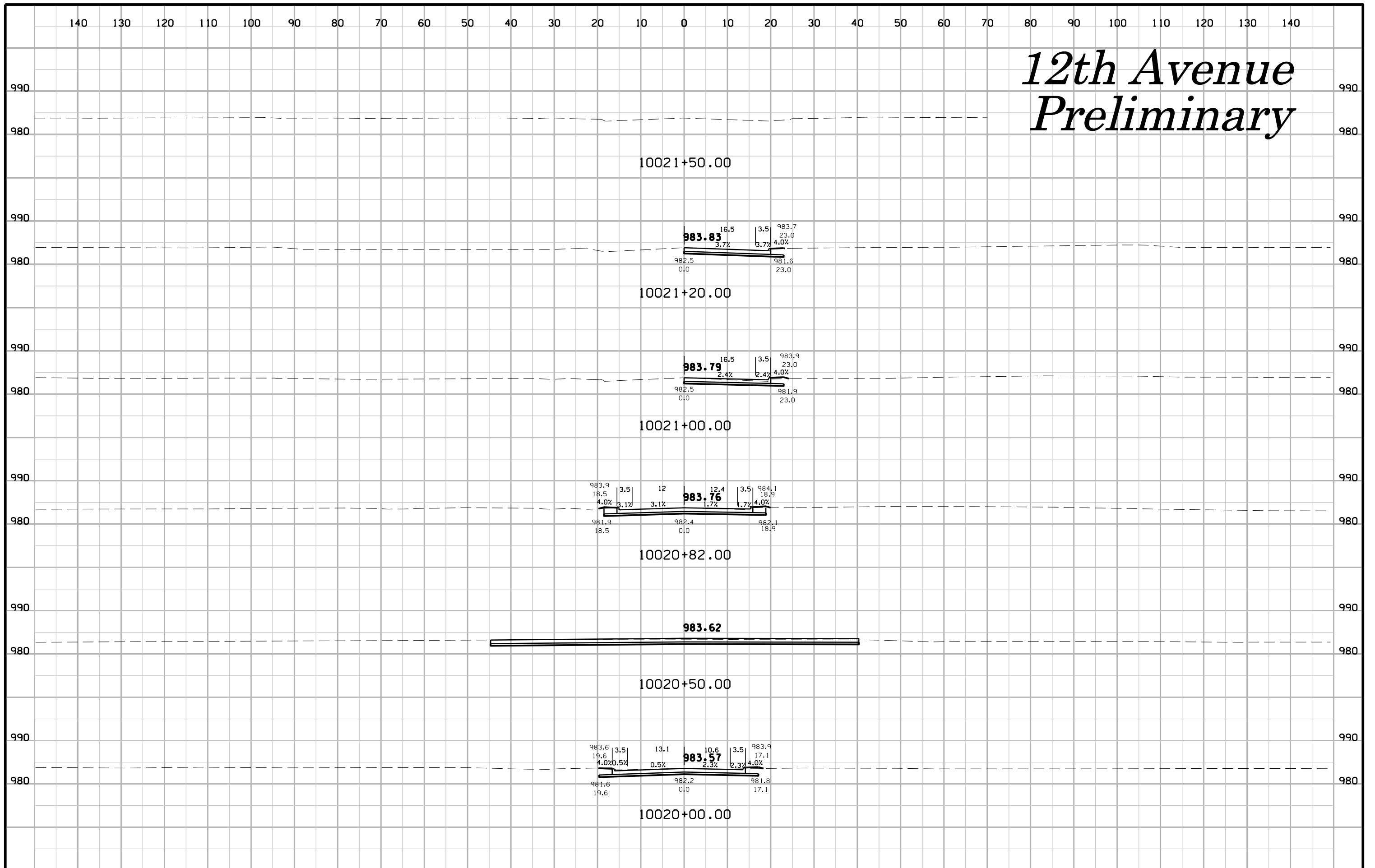
8th Street Preliminary



8th Street Preliminary

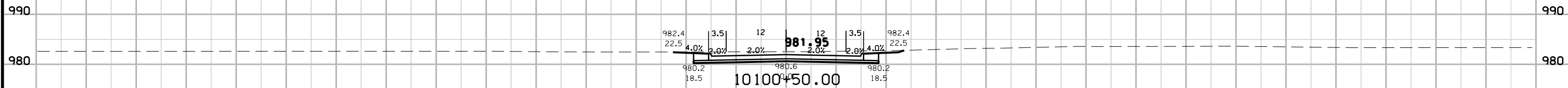
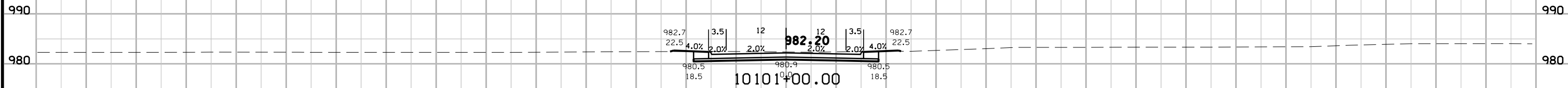
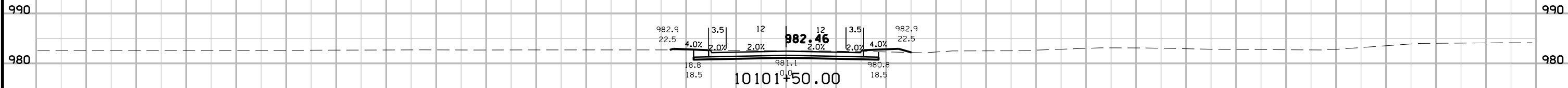
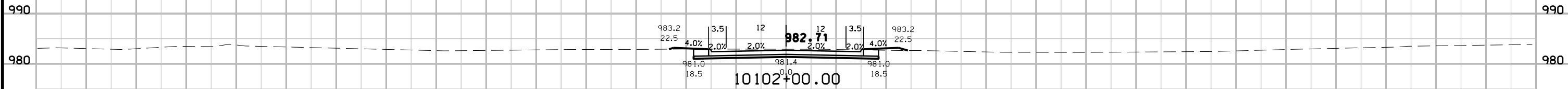


12th Avenue Preliminary



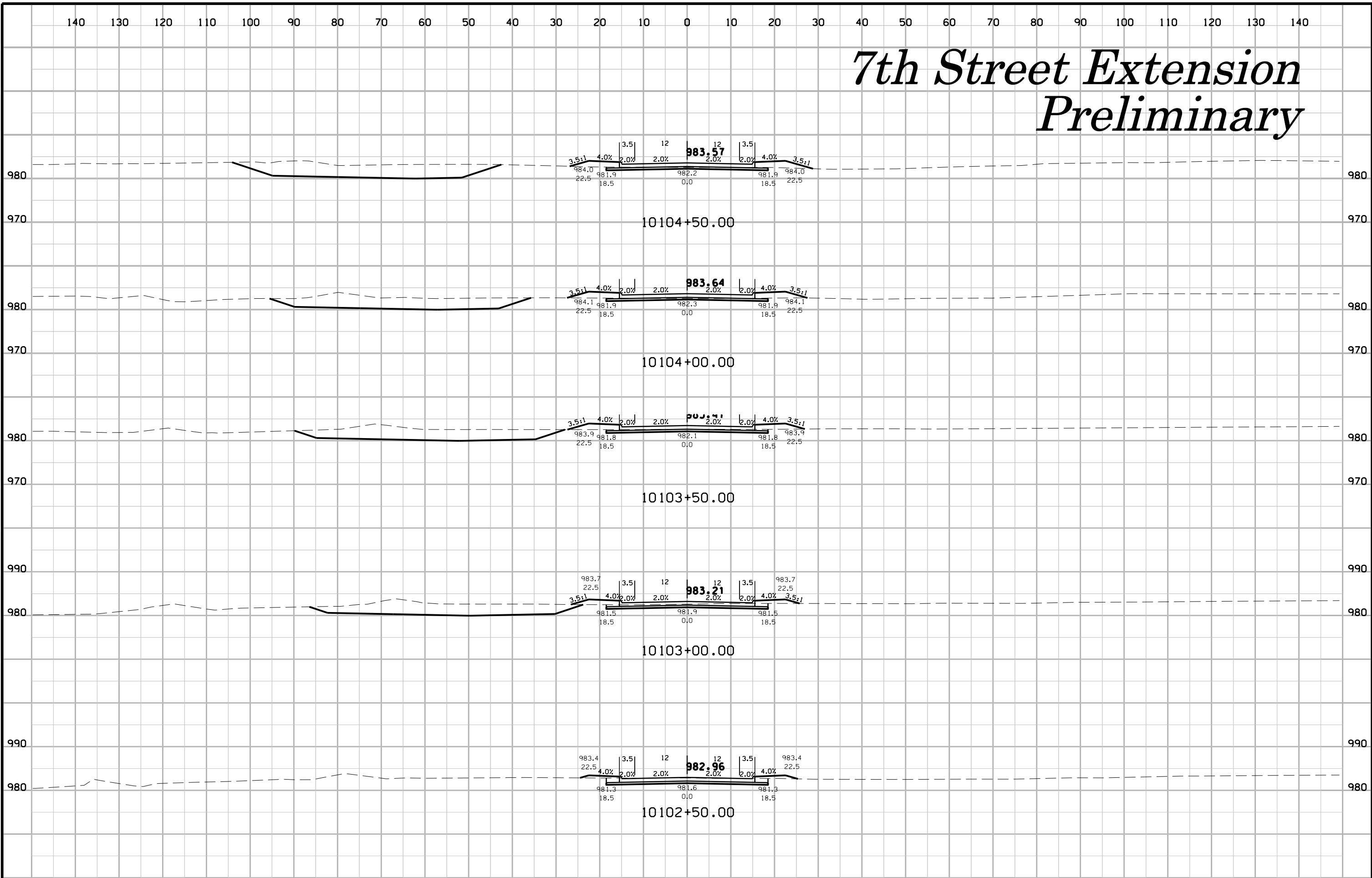
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7th Street Extension Preliminary



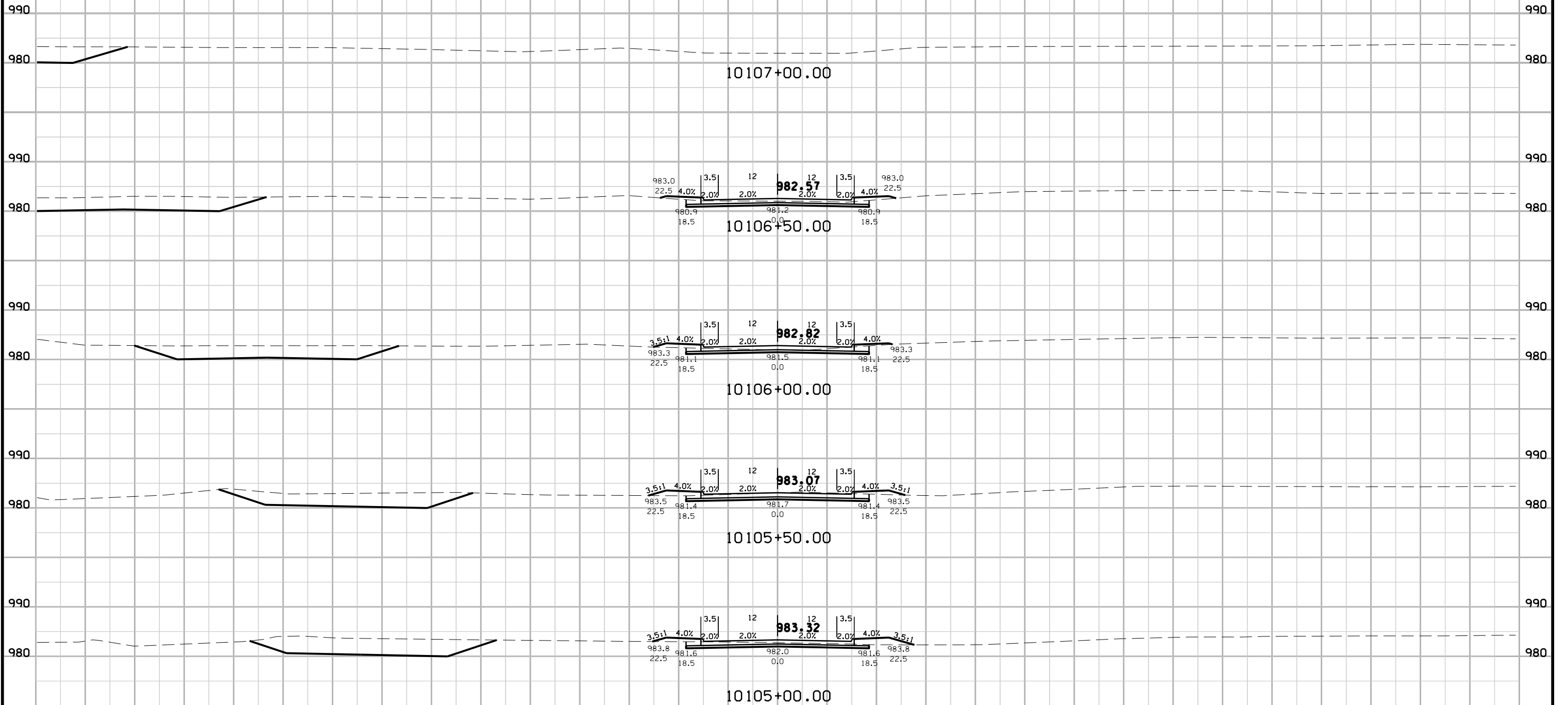
10100+00.00

7th Street Extension Preliminary

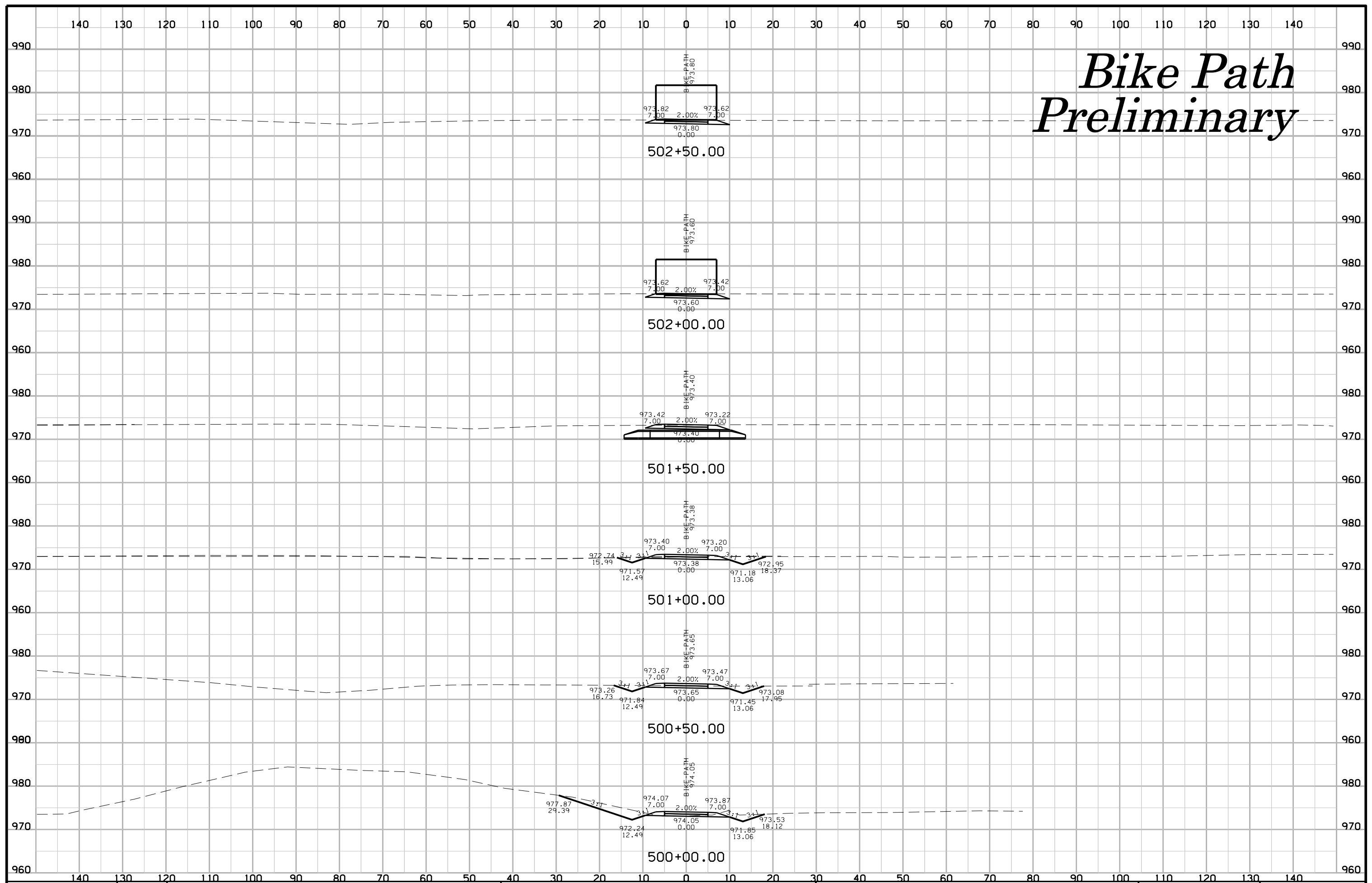


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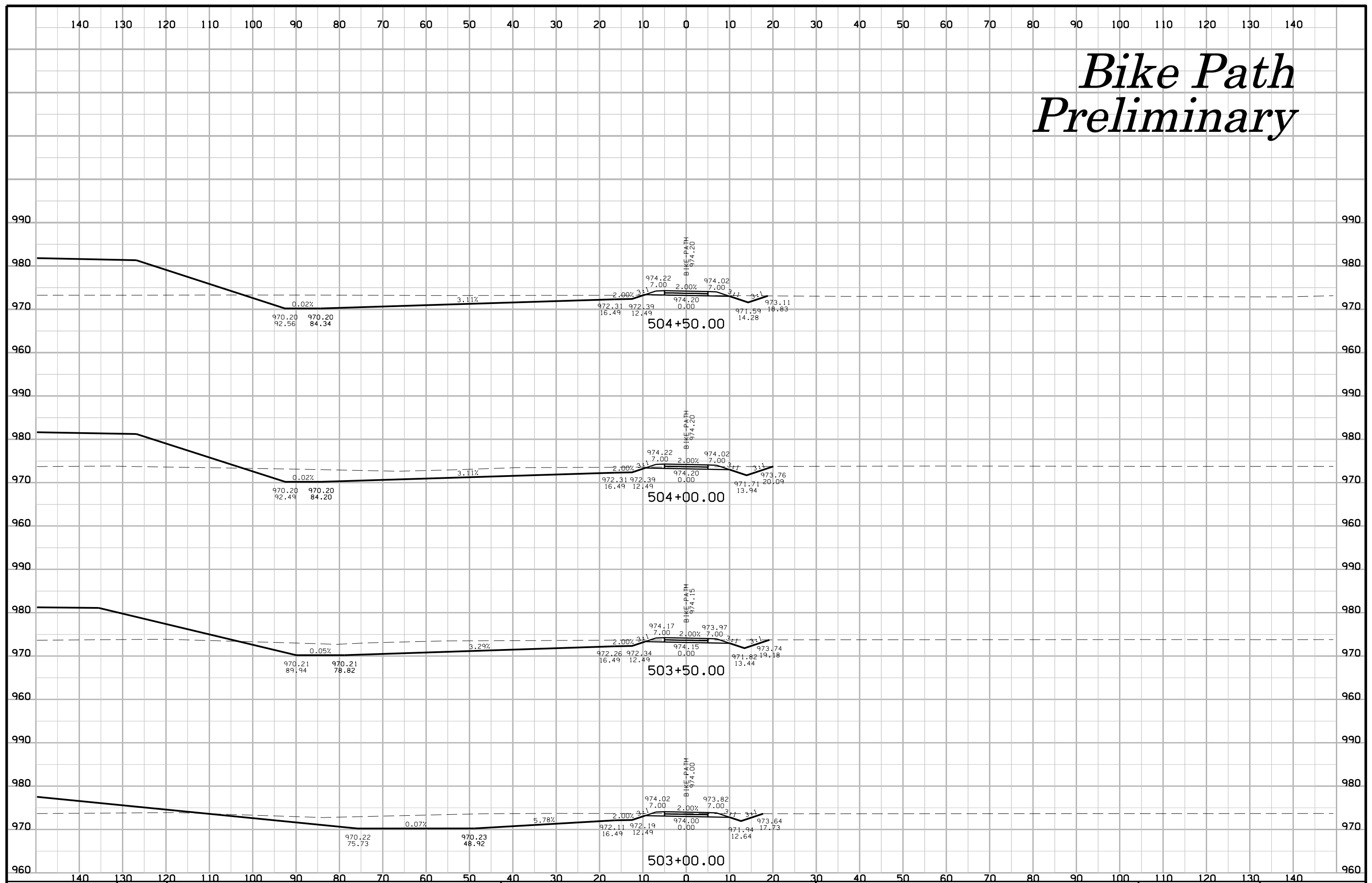
7th Street Extension Preliminary



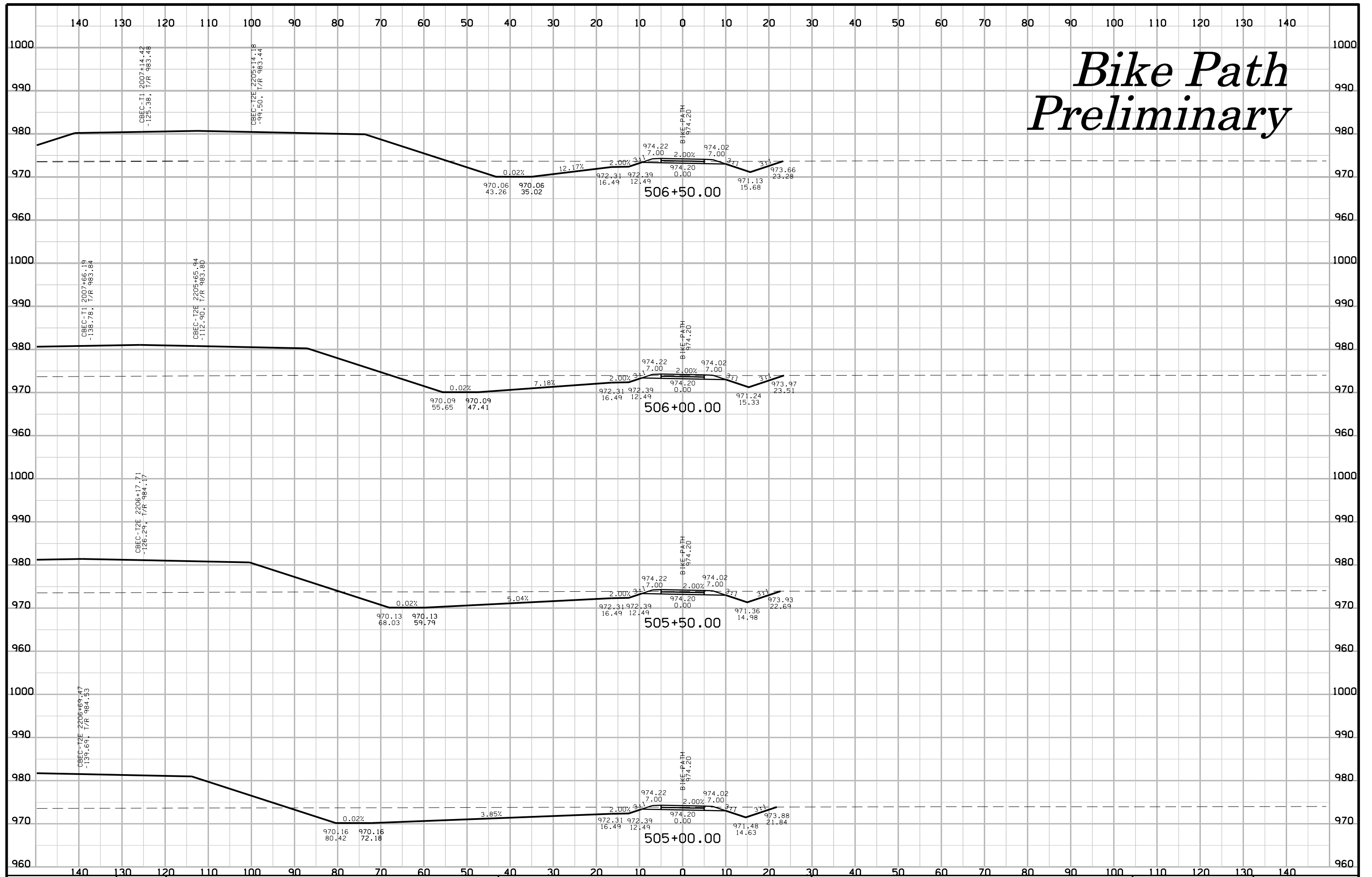
Bike Path Preliminary



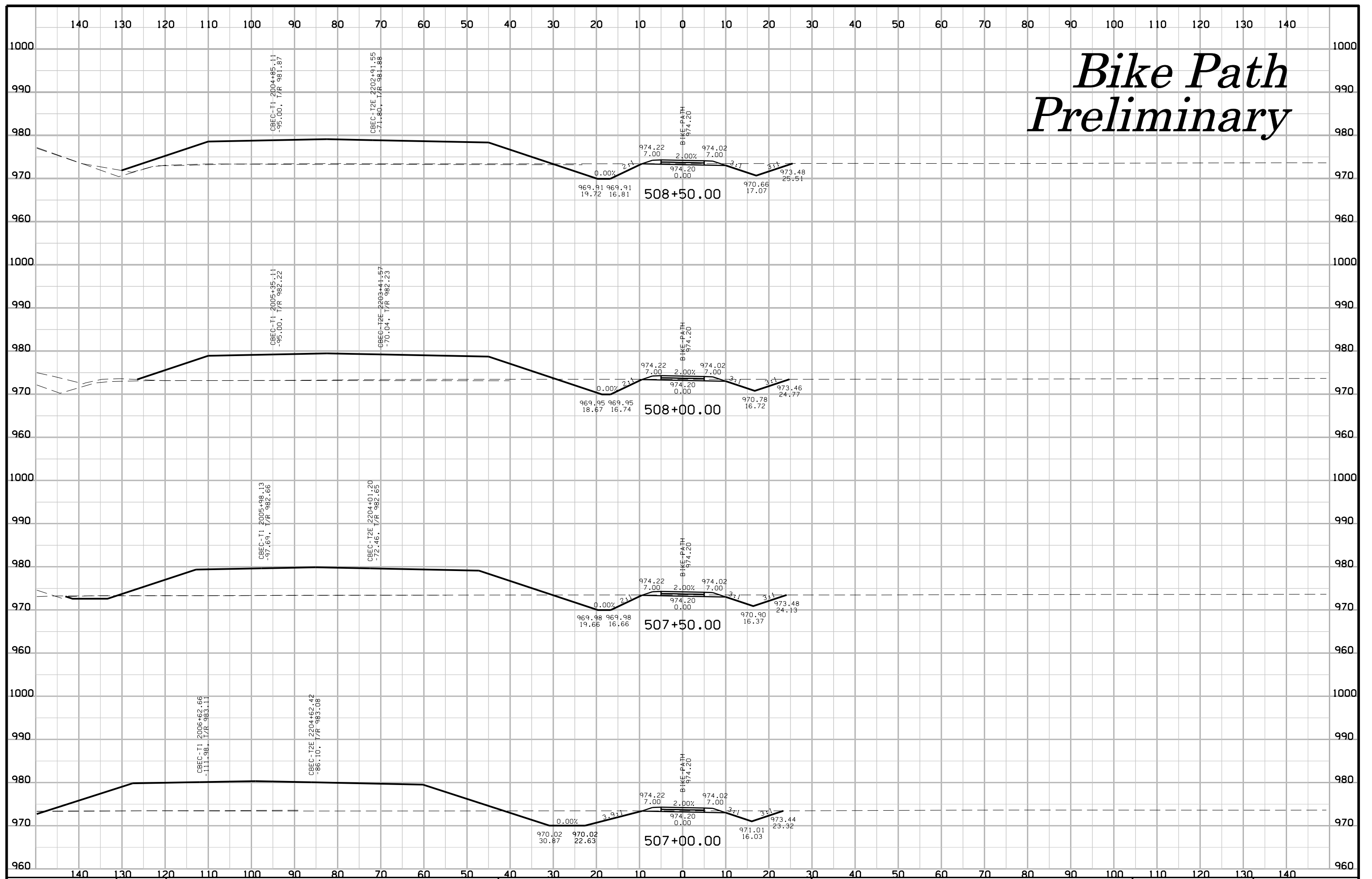
Bike Path Preliminary



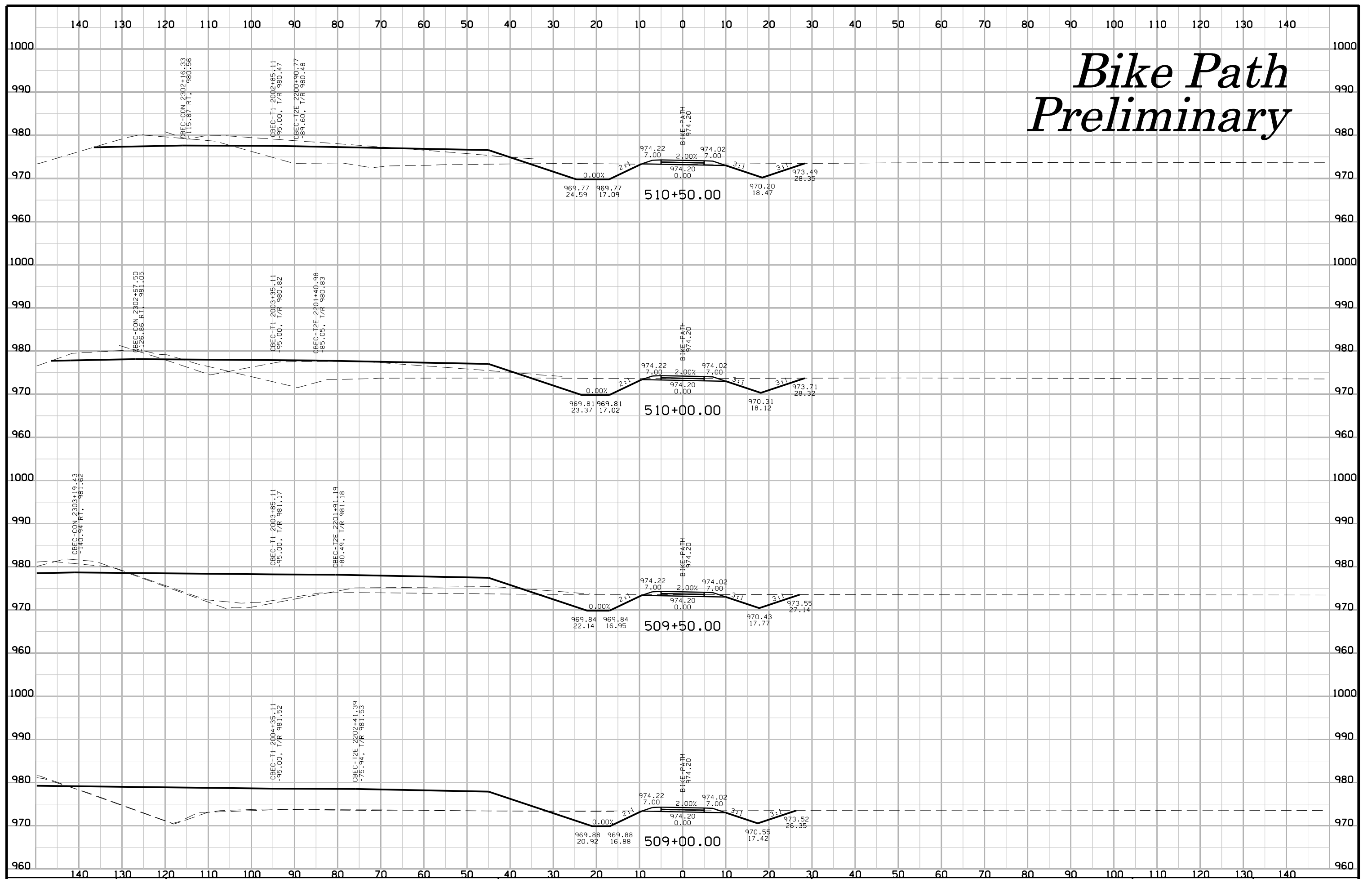
Bike Path Preliminary



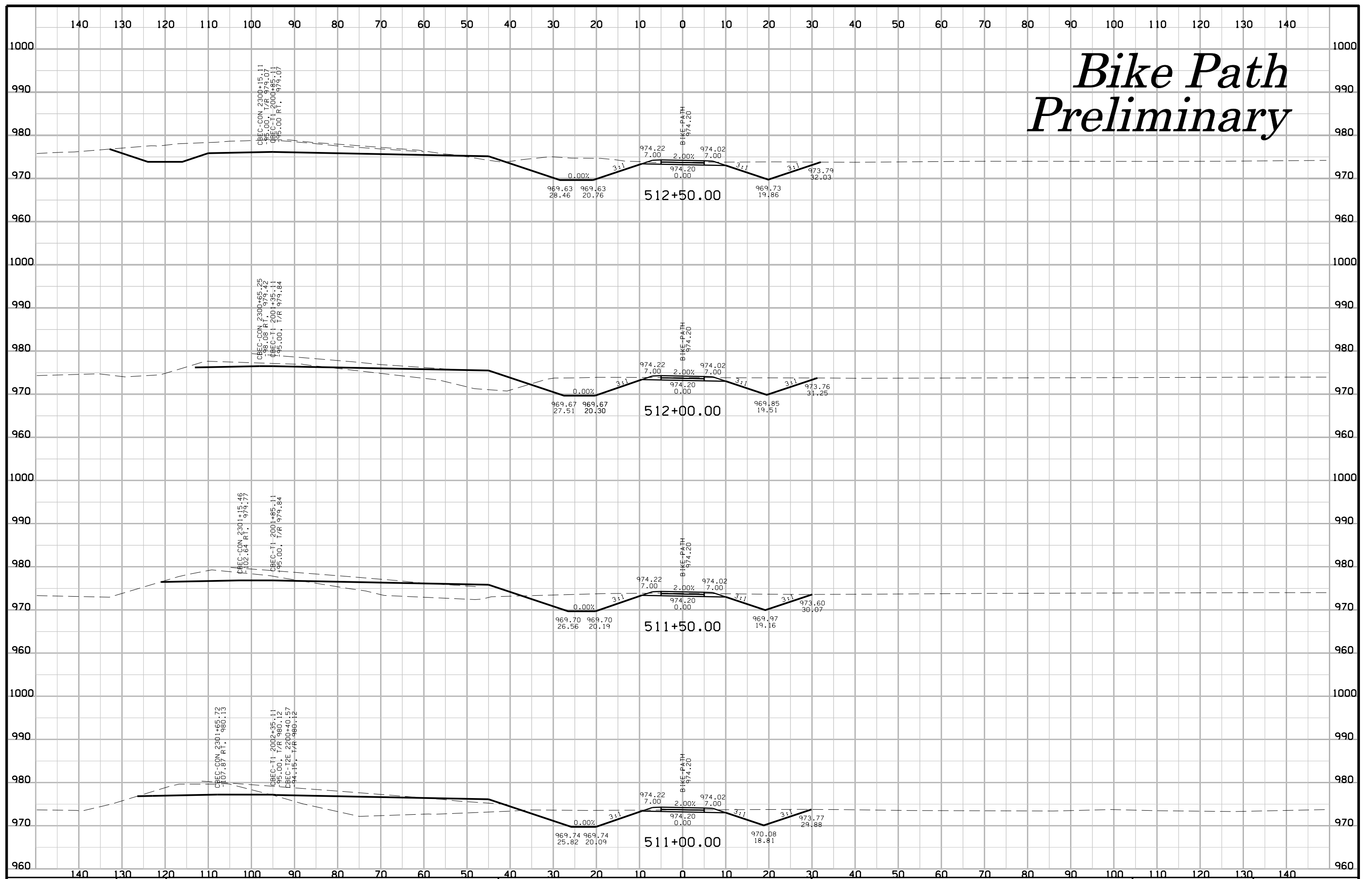
Bike Path Preliminary



Bike Path Preliminary



Bike Path Preliminary



Bike Path Preliminary

